OMB Approval 2700-0042

AWARD/CONTRACT	1 THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350) ▶	RATING	PAGE	OF	PAGES
		DO-C9	1		299

2. CONTRACT (Proc. Inst. Ident.) NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQUEST/PROJECT NO.
NAS10-02001	December 13, 2001	MR 021151 (F)

5. ISSUED BY CODE OP-OS
NASA, John F. Kennedy Space Center
Office of Procurement
Kennedy Space center, Florida 32899

6. ADMINISTERED BY (If other than Item 6) CODE

7. NAME AND ADDRESS OF CONTRACTOR (No. street, county, state and ZIP Code)
Dynamac Corporation
2275 Research Boulevard
Suite 300
Rockville, MD 20850

8. DELIVERY
☐ FOB ORIGIN ☐ OTHER (See below)

9. DISCOUNT FOR PROMPT PAYMENT

10. SUBMIT INVOICES (4 copies unless otherwise specified) TO THE ADDRESS SHOWN IN: ▶ ITEM: See Item 12

CODE FACILITY CODE

11. SHIP TO/MARK FOR CODE NAS10-02001

12. PAYMENT WILL BE MADE BY CODE GG-B-C2
NASA, John F. Kennedy Space Center
Accounts Payable
Kennedy Space Center, Florida 32899

13. AUTHORITY FOR USING OTHER FULL AND OPEN COMPETITION:
☐ 10 U.S.C. 2304(c)( ) ☐ 41 U.S.C. 253(c)( )

14. ACCOUNTING AND APPROPRIATION DATA
MR 021151
YA/CW-1/2550C/400000/52/02 $367,000.00

15A. ITEM NO.	15B. SUPPLIES/SERVICES	15C. QUANTITY	15D. UNIT	15E. UNIT PRICE	15F. AMOUNT
	Life Science Services Contract Basic plus Phase-In Period (December 13, 2001 through September 30, 2005)	1	Job	Cost Max Fee (Award plus Performance Fee)	

15G. TOTAL AMOUNT OF CONTRACT ▶ $54,138,670

16. TABLE OF CONTENTS

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CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE

17. ☐ CONTRACTOR'S NEGOTIATED AGREEMENT *(Contractor is required to sign this document and return _3_ copies to issuing office.)* Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. *(Attachments are listed herein.)*

18. ☐ AWARD *(Contractor is not required to sign this document.)* Your offer on Solicitation Number _____ including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) this award/contract. No further contractual document is necessary.

19A. NAME AND TITLE OF SIGNER *(Type or print)*
Laurence M. Rose, Vice President, Contracts

20A. NAME OF CONTRACTING OFFICER
James E. Hattaway, Jr.

19B. NAME OF CONTRACTOR	19C. DATE SIGNED	20B. UNITED STATES OF AMERICA	20C. DATE SIGNED
(Signature of person authorized to sign)	12/13/01	BY James E. Hattaway (Signature of Contracting Officer)	12-13-01

INDEX OF CLAUSES

SECTION B OF NAS10-02001

SUPPLIES OR SERVICES AND PRICES/COST

ARTICLE B-1 TYPE OF CONTRACT / DESCRIPTION OF SERVICES

This is a performance based, cost-plus-award fee contract with a performance fee feature. In support of the Kennedy Space Center's Life Sciences efforts the Contractor's prime focus shall be to provide non-personal services in the areas of project / business management, laboratory operations, educational outreach, biological science, medical operations, and occupational health as described in Section C, "Description/Specifications/Work Statement", and Section J, Attachment I, "Statement of Work. In addition, the following deliverables are required:

Item	DESCRIPTION	REFERENCE	DUE DATE
1.	Services and Data Requirement Items in accordance with the Schedule, SOW, and SOW Attachments and Appendices	Contract Schedule, Section J, Attachment I, Statement of Work, SOW Attachments and Appendices	As required by referenced document
2.	Notice of Estimated Cost Increases	Article B-6	As required by referenced document
3.	Provisional Billing Rate Proposals	Article B-7	As required by referenced document
4.	Cost Phasing Plans	Article C-4 and DRD-25	In accordance with DRD 25
5.	New and Modified Mission Plan Elements Procedures – Documentation	Article C-5	As generated
6.	Financial Management Reports	Article G-1 and DRD 1	As Required
7.	Contractor's Self Evaluation	Article G-2, Section J, and the Performance Evaluation Plan	As required by referenced document
8.	Reports of Reportable Items	Article G-4	As Required
9.	Requisition and Invoices/Shipping Documents (DD Form 1149)	Article G-6	As Required
10.	Travel Reports	Article G-9	As Required
11.	Export Licenses	Article H-1	As Required
12.	Security Controls Information	Article H-5	As Required
13.	Motor Vehicle Monthly Billings	Article H-6	Monthly
14.	Motor Vehicle Utilization Plan	Article H-6 and DRD-21	Within 30 days after contract award, update annually
15.	Compliance with Radiation Protection Requirements	Article H-7	Within 30 days after contract award
16.	Health Examinations and Physical Requirements	Article H-8	As Required
17.	Hazardous Material Safety Data	Article H-9	As Required

SUPPLIES OR SERVICES AND PRICES/COST

Item	DESCRIPTION	REFERENCE	DUE DATE
18.	NASA Form 1509, Facility Project – Brief Project Document	Article H-11	As Required
19.	Centerwide Manpower Report	Article H-13and DRD-22	Quarterly
20.	Information Technology Security Plan	Article I-7 and DRD-19	Annually
21.	National Agency Check Investigation	Article I-7	As Required

(End of Text)

ARTICLE B-2 CONTRACT VALUE

A. The contract value is comprised of the estimated cost, award fee, and performance fee as summarized in the following Contract Table B-2.A, Contract Value:

Table B-2.A Contract Value				
Period of Performance	**Estimated Cost**	**Award Fee (Earned Plus Available)**	**Performance Fee (Earned Plus Available)**	**Total Value (Est. Cost, CPAF, PF)**
Base Period:				
01/01/02-9/30/02				$ 9,559,455
10/01/02-9/30/03				$12,825,837
10/01/03-9/30/04				$16,494,106
10/01/04-9/30/05				$15,226,603
Option Period 1:				
10/01/05-9/30/06				$15,656,878
10/01/06-9/30/07				$16,139,529
Option Period 2:				
10/01/07-9/30/08				$16,637,875
10/01/08-9/30/09				$17,148,126

SUPPLIES OR SERVICES AND PRICES/COST

B. It is agreed that the total available fee pool will be divided into an available award fee pool (75% of the total available fee pool) and a performance fee pool (25% of the total available fee pool).

C. The available and earned award fees are as follows:

1. The amount of Available Award Fee (AAF) and earned award fee for each award fee period is recorded in the following Contract Table B-2.B, Available and Earned Award Fee, and will be updated in accordance with the articles of this contract:

Table B-2.B Available and Earned Award Fee				
Award Fee Period	**Available**	**Earned**	**Score**	**Rating**
Base Period:				
01/01/02-9/30/02			TBD	TBD
10/01/02-9/30/03			TBD	TBD
10/01/03-9/30/04			TBD	TBD
10/01/04-9/30/05			TBD	TBD
Option Period 1:				
10/01/05-9/30/06			TBD	TBD
10/01/06-9/30/07			TBD	TBD
Option Period 2:				
10/01/07-9/30/08			TBD	TBD
10/01/08-9/30/09			TBD	TBD

D. It is agreed that the amount of award fee earned, if any, shall be determined in accordance with Section J, Attachment III, "NASA's Performance Evaluation and Award Fee Plan for Contract NAS10-02001".

E. It is agreed that the performance fee earned, if any, shall be determined in accordance with Section J, Attachment III, "NASA's Performance Evaluation and Award Fee Plan for Contract NAS10-02001."

(End of Text)

ARTICLE B-3 CONTRACT FUNDING

Pursuant to FAR Clause 52.232-22, Limitation of Funds, funds presently allotted to this contract and the period through which they are estimated to be adequate are specified in Contract Table B-5, Contract Value and Funding as follows:

SUPPLIES OR SERVICES AND PRICES/COST

Table B-3 Contract Value and Funding					
		Funding			
As of Mod #	Contract Value *	Cost	Fee	Total Cost and Fee	Adequate Through
TBD	TBD	TBD	TBD	TBD	TBD

* Estimated cost plus fee from Table B-2.A

(End of Text)

ARTICLE B-4 OPTIONS TO EXTEND THE PERIOD OF CONTRACT

A. In accordance with the values shown on Table B-3A, this contract is renewable for the following periods at the option of the Government:

Option No.	Option Period
1	10/01/05 – 9/30/07
2	10/01/07 – 9/30/09

B. The Government may extend the term of the contract for the quantities of supplies or services and period specified in the Schedule by written modification of this contract before the current contract performance period expires, provided that the Government shall give the Contractor a preliminary written notice of intent to extend at least 60 days prior to expiration of any current period of performance. The preliminary notice does not commit the Government to exercise the option.

C. If the Government exercises any option, the extended contract shall be considered to include this option provision.

D. The total duration of this contract, including the exercise of any option(s) under this clause, shall not exceed seven (7) years nine (9) months .

E. It is understood and agreed that any continued performance of services from period to period shall be at the sole determination of the Government and will be contingent upon prior satisfactory performance. Failure to renew the contract for any subsequent period of performance shall not be considered as a termination for the convenience of the Government.

(End of Text)

SUPPLIES OR SERVICES AND PRICES/COST

ARTICLE B-5 NONPROPOSED COSTS

(a) The total estimated cost of this contract includes the following estimated costs:

Period	Travel	Materials	SERPL Activation
Base Year 1	$318,750	$1,125,000	N/A
Base Year 2	$437,750	$1,545,000	N/A
Base Year 3	$450,883	$1,591,350	$1,500,000
Base Year 4	$464,409	$1,639,091	N/A
Option 1 – Year 1	$478,341	$1,688,091	N/A
Option 1 – Year 2	$492,691	$1,738,911	N/A
Option 2 – Year 1	$507,472	$1,791,078	N/A
Option 2 – Year 2	$522,696	$1,844,811	N/A

(b) These costs are the Government's best estimate of what the actuals will be. There will be no adjustment in the fee(s) of the contract should the actuals be different than these estimates, unless additional effort is added to the contract or there is a change to the contract under the Changes clause of this contract, which impacts these estimates.

(End of Text)

ARTICLE B-6 ESTIMATED COST INCREASES

(a) This is a completion type Performance Based Contract under which the Contractor is required to meet all the requirements irrespective of changes or variations in skills or work emphasis within the contract scope.

(b) The requirements of this clause are in conjunction with the Limitation of Cost clause or the Limitation of Funds clause of this contract.

(c) The Contractor shall notify the Contracting Officer in writing when the Contractor has reason to believe that the total cost for performance of this contract, exclusive of any fee, will be either greater or substantially less than the total estimated cost stated in this contract. Notification shall not be delayed pending preparation of a proposal.

(d) A proposal is required to support a request for an increase in the estimated cost of the contract. The proposal should be submitted as soon as possible after the above notification but no later than 60 days before the incurred costs are expected to exceed the estimated cost. This will allow adequate time for the Government to evaluate the proposal and to negotiate any increase in estimated cost with the Contractor.

(e)(1) The proposal shall be submitted in the following format unless some other format is directed or approved by the Contracting Officer:

SUPPLIES OR SERVICES AND PRICES/COST

Incurred costs to date
Projected cost to completion
Total cost at completion
Current negotiated estimated cost
Requested increase in estimated cost

(2) The projected cost to completion shall consist of the following: "Other than cost or pricing data" unless the Contracting Officer requests or approves the submittal of a greater or lesser amount of information:

(i) Elements of cost with supporting detail for estimated direct labor hours, direct and indirect rates, materials and subcontracts, and other elements.

(ii) Supporting explanation for the increases and projections, sufficient for the Government to understand the reasons for the increased estimated cost.

(End of clause)

ARTICLE B-7 KSC 52.231-90 SPECIAL COST PROVISIONS (DEC 2000) (Modified)

Pursuant to the terms of the contract clause entitled "Allowable Cost and Payment", the contractor shall be reimbursed for such actual and allowable expenditures incurred in the performance of work required by this contract as may be approved by the Contracting Officer, subject to the following limitations and provisions:

A. Travel - Travel required in performance of work under this contract must be in accordance with the Contractor's approved travel policy.

B. Reimbursement Ceiling Rates

Notwithstanding the terms of the contract clause entitled "Allowable Cost and Payment," the contractor shall not be reimbursed for General and Administrative in excess of the following ceilings:

Period	**G&A Ceiling Rate**
For the Contractor's Fiscal Year Ending:	
2002	
2003	
2004	

SUPPLIES OR SERVICES AND PRICES/COST

2005		
2006		
2007		
2008		
2009		

The base for application of G&A expenses is defined as total cost input exclusive of G&A expense and less subcontractor cost.

C. Provisional Billing Rates

Provisional billing rates for indirect cost pools shall be set at the discretion of the Contracting Officer based upon proposals from the Contractor and following review by Government auditors. These provisional rates shall be specified in writing and may be revised either retroactively or prospectively by the Contracting Officer. Prior to each Contractor fiscal year, the Contractor shall submit a proposal for the coming year's provisional billing rates.

D. Relocation

Reimbursement for relocation costs shall be in accordance with FAR 31.205-35. No relocation costs will be reimbursable under this contract for employees whose residence at the time of hiring or assignment to this contract was within a fifty (50) mile radius of Kennedy Space Center, Florida. However, in no event shall the relocation costs exceed the following ceiling unless authorized by the Contracting Officer:

Period	**Ceiling Cost Per Relocation**
Base Year 1	$0
Base Year 2	$0
Base Year 3	$0
Base Year 4	$0
Option 1 – Year 1	$0
Option 1 – Year 2	$0
Option 2 – Year 1	$0
Option 2 – Year 2	$0

It is mutually agreed that the contractor shall not be entitled to reimbursement under this contract

for cost of relocating employees to their "home site" or any other gaining contractor activity.

E. Household Goods Shipments

1. Movement of household goods and personal effects of contractor employees, when the total transportation costs are to be reimbursed by the Government, shall be made by carriers furnishing reduced rates under 49 U.S.C. Section 10721, when such rates are available. The contractor will inform the Transportation Office, TA-E1, Kennedy Space Center, Florida, Telephone No. 321-867-4105, of each planned movement; and that office will provide the contractor with applicable instructions for household goods movement and such other support or guidance that is requested.

2. The contractor shall furnish the Transportation Office, TA-E1, Kennedy Space Center, Florida, with advanced information of any planned mass movement of personnel (10 or more families) thirty (30) or more days prior to the start of any major relocations in order to provide the Government with sufficient time for rate negotiation action.

3. Carrier's bill of lading and related shipping documents will be annotated with the following statement:

"TRANSPORTATION HEREUNDER IS FOR THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, AND THE ACTUAL TOTAL TRANSPORTATION CHARGES PAID TO THE CARRIER(S) BY THE CONSIGNOR OR CONSIGNEE ARE TO BE REIMBURSED BY THE GOVERNMENT, PURSUANT TO COST-REIMBURSABLE CONTRACT NO. NAS10-02001. THIS MAY BE CONFIRMED BY CONTACTING SUCH AGENCY AT 321-867-4105 or 867-2975."

4. One (1) copy of all carriers' bills of lading will be furnished the Transportation Office, TA-E1, Kennedy Space Center, Florida on movements of household goods and personal effects which are the result of the relocation of the contractor employees when the total transportation costs are to be reimbursed by the Government. Requests for deviations from the procedures established by this clause should be in writing and addressed to the Contracting Officer. Such requests must be made prior to the proposed move and in sufficient time for the Contracting Officer to make a decision.

5. Failure to comply with the provisions of this clause may result in the disallowance of costs, which are in excess of those which would

have resulted from utilization of reduced rates obtainable under the provisions of this clause.

F. Severance Pay

Reimbursement for severance pay shall be in accordance with the provisions of FAR 31.205-6(g). However, in no event shall the Government reimburse the contractor for the cost of severance pay for any individual Contractor employee who voluntarily elects to stay in place and work for a succeeding Contractor.

(End of Clause)

ARTICLE B-8 NFS 1852.237-71 Pension Portability (JAN 1997)

(a) In order for pension costs attributable to employees assigned to this contract to be allowable costs under this contract, the plans covering such employees must:

(1) Comply with all applicable Government laws and regulations;
(2) Be a defined contribution plan, or a multiparty defined benefit plan operated under a collective bargaining agreement. In either case, the plan must be portable, i.e., the plan follows the employee, not the employer;
(3) Provide for 100 percent employee vesting at the earlier of one year of continuous employee service or contract termination; and
(4) Not be modified, terminated, or a new plan adopted without the prior written approval of the cognizant NASA Contracting Officer.

(b) The Contractor shall include paragraph (a) of this clause in subcontracts for continuing services under a service contract if:

(1) The prime contract requires pension portability;
(2) The subcontracted labor dollars (excluding any burdens or profit/fee) exceed $2,500,000 and ten percent of the total prime contract labor dollars (excluding any burdens or profit/fee); and
(3) Either of the following conditions exists:
(i) There is a continuing need for the same or similar subcontract services for a minimum of five years (inclusive of options), and if the subcontractor changes, a high percentage of the predecessor subcontractor's employees are expected to remain with the program; or
(ii) The employees under a predecessor subcontract were covered by a portable pension plan, a follow-on subcontract or a subcontract consolidating existing services is awarded, and the total subcontract period covered by the plan covers a minimum of five years (including both the predecessor and successor subcontracts).

SUPPLIES OR SERVICES AND PRICES/COST

(End of Clause)

ARTICLE B-9 TRANSFER OF ACCRUED BENEFITS

The successful offeror will accept transfer of accrued sick leave hours of personnel hired from the incumbent contractor without a break in service from the predecessor contract in excess of 60 days. However, the costs of these carry-over hours will not be paid under the successor contract unless used. Additionally, the successor offeror will recognize the vacation accrual rates, earned through seniority, of personnel hired from incumbent contractor without a break in service from the predecessor contract in excess of 60 days.

The Contractor shall include a special provision similar to this provision in their major subcontracts.

(End of Text)

DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

ARTICLE C-1 KSC 52.210-90 SCOPE OF WORK (FEB 1990) (MODIFIED)

A. The Contractor shall perform all the effort described in Section J, "List of Attachments," Attachment I, "Statement of Work, Life Sciences Support Contract." At the start of the contract, the Contractor shall assume, as a minimum, all services described in Section J, Attachment I, Appendix 5, "Mission Plan".

B. The Contractor's contractual obligation is to perform the Statement of Work within the estimated cost of this contract as set forth in Article B-2, "Contract Value," and as further constrained by Article I-1, FAR 52.232-22, "Limitation of Funds," and Article B-5, "Contract Funding."

C. The Contractor's obligation under this contract may include resolution of unusual or emergency situations or increased work volume which may occur from time to time. Such requirements shall be considered to be within the general scope of the contract, entirely within the Contractor's original contractual obligation, and will not constitute nor be construed as a change within the meaning of the "Changes" clause of this contract. However, if such work is considered by the Contractor to be outside the scope of their contractual obligation, the Contractor, before performing any effort pursuant to such Government direction, shall refer such questions to the Contracting Officer for resolution in accordance with the process set forth in Article B-6.

(End of Clause)

ARTICLE C-2 VARIATIONS IN SERVICE LEVELS

1. The total estimated cost and fee(s) of this contract are based upon the Contractor's estimate of the magnitude of effort required to provide the services described in Section J, Attachment I, "Statement of Work", and addenda thereto, for the entire term of the contract, including all exercised options.

2. The Contractor will perform its duties in a dynamic environment in which the range of effort required to support KSC's Life Sciences activities will vary. Range of effort is comprised of all activities to be supported and resources to be used in the delivery of support.

(a) "Activities" include any organizations, laboratories, programs, projects, systems, and tasks funded during the course of the contract.

(b) "Resources" include all labor, skills, professions, facilities (except as otherwise provided in the contract), supplies and materials required to deliver high quality and timely support.

DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

3. During the term of the contract, the Contractor shall deliver support in all functional areas identified in the Attachment I, Statement of Work, across the full range of effort identified by the Contracting Officer or his/her technical representative, regardless of the magnitude of effort actually required. The Contractor understands and agrees to the following:

(a) Variation in the number or type of specific activities to be supported shall not constitute a change to the contract, and shall not entitle the Contractor to an equitable adjustment.

(b) Variation in the magnitude or mix of resources needed by the Contractor to deliver support shall not constitute a change to the contract, and shall not entitle the Contractor to an equitable adjustment.

4. Substantial expansion of the functional areas of responsibility, as established in the Attachment I, Statement of Work, may constitute a change to the scope of the contract; however, the Contractor understands that the Attachment I, Statement of Work, is intended to be construed broadly to achieve KSC's Life Sciences objectives.

(End of Text)

ARTICLE C-3 DATA REQUIREMENTS LIST (DRL)

The Contractor shall furnish all data identified and described in Section J, Attachment I, Appendix 1, "DRL/DRD" and in supplemental DRLs to be subsequently furnished to the Contractor for additional data which the Government is authorized to request in accordance with the terms of this contract. Such data shall be prepared in accordance with the Data Requirement Description - KSC Form 16-246 (hereinafter called DRD) attached to the DRL and referenced in the DRL for each line item of data specified in the DRL.

A. The Government reserves the right to reasonably defer the date of delivery of any or all line items of data specified in the DRL. Such right may be exercised at no increase in the contract amount. The Government also reserves the right to terminate the requirement for any or all line items of data specified in the DRL. In the event the Government exercises this latter right, the contract amount shall be subject to equitable adjustment in accordance with the clause hereof entitled "Changes."

B. To the extent that data required to be furnished by other provisions of this contract are also identified and described in the DRL, or supplemental DRLs, and in the DRDs referenced in such DRL(s), compliance with the DRL shall be accepted as compliance with such other provisions. In the event of conflict between the identity and description of data called for by specific provisions of this contract and the DRL or DRDs, the DRL and DRDs shall control the data to be furnished.

C. Nothing contained in this Data Requirements List provision shall relieve the Contractor from furnishing data called for by, or under the authority of, other provisions of this contract which are not identified and described in the DRL attached to this contract. Whenever such data are

identified, either by the Contractor or the Government, they will be listed on a DRL and described on DRDs.

D. Except as otherwise provided in this contract, the cost of data to be furnished in response to the DRL attached to this contract is included in the price of this contract if it is a fixed-price contract; or, if this is a cost-type contract, the cost is included in the estimated cost and shall be reimbursed in accordance with FAR 52.216-7, "Allowable Cost and Payment" clause.

(End of Text)

ARTICLE C-4 TRACKING AND REPORTING REQUIREMENTS

On the effective date of the contract, the Contractor shall deliver a cost phasing plan, for each of the mission plan elements designated in Section J, Attachment I, Appendix 5, Mission Plan, in accordance with the requirements of DRD 25, Cost Phasing Plan with the following conditions:

- Planned staffing by month, by identification number (mission plan element);
- Planned ODC's and indirects by month, by identification number (mission plan element);
- A total roll up of all identification numbers (mission plan element), by labor category, ODC's, indirects, etc. to be delivered to the Contracting Officer, the COTR, the Contract Resources Analyst, and other codes as identified in DRD 25.

The cost phasing plan shall be in the format designated by the NASA Contracting Officer and shall be delivered at the intervals specified in DRD 25. Financial Management Reporting Requirements, throughout the period of performance, shall be at these same levels.

(End of Text)

ARTICLE C-5 NEW AND MODIFIED MISSION PLAN ELEMENT PROCEDURES

As described in Article C-1, Scope of Work, the Contractor shall assume, at the start of the contract, the services described in Section J, Attachment I, Appendix 5, "Mission Plan". Variations to the range of services shall be handled as follows:

(a) New Mission Element Procedures:

1. The Contractor may be approached to assist an activity(ies) not previously supported but within the scope of the contract.

2. The Contractor shall then prepare a general description of how it intends to support the work, generate a unique staffing plan for that work, along with the total estimated cost—from the planned start date through the remaining contract year, and provide that documentation to the appropriate Financial Analyst and the Contracting Officer's Technical Representative. The

Government will, in turn, use its own internal process to ensure that funds are available to support that work. The Government process includes concurrence, not of the contractor's proposed support but, of the associated cost to ensure that sufficient funds are available to support the activity, from:

- The Assigned Technical Representative (ATR)
- The Financial Analyst
- The Contracting Officer's Technical Representative (COTR)

3. The Contracting Officer shall notify the Contractor in writing that work may proceed. All verbal notices will be followed in writing within three business days.

(b) Modified Mission Plan Element:

1. Occasionally, an established funding source will need adjustment. Should this occur, the process is the same as described in paragraph (a) above, except the documentation shall identify a revision to the mission plan element.

The Contractor shall prepare a general description of how it intends to support the modified work and the effect to the original mission plan element workload, if any, along with the modified staffing plan(s) and revised estimated cost(s). This documentation shall be delivered to the appropriate funding organization, and the same process and distribution as described in paragraph (a) above shall be followed.

(End of Text)

SECTION D OF NAS10-02001

DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

ARTICLE D-1 **KSC 52.247-94 MARKING INSTRUCTIONS – CONTRACTOR ACQUIRED EQUIPMENT (NOV 2000)**

Inbound shipments to the contractor of contractor acquired equipment and parts from all sources for the account of the Government shall be consigned to and marked as follows:

Transportation Officer, NASA
J-BOSC Warehouse, Building M6-744
Kennedy Space Center, Florida 32899

Mark for: _____*

*Contractor to insert the name, code and address of the consignee and, if appropriate, identifying contract or order number.

NOTE: (On shipments of explosives, propellants, dangerous and potentially hazardous items via motor carrier, the contractor shall require the carrier to call KSC Transportation Office, TA-E1, phone 321-867-2975, immediately prior to arrival, in order to receive instructions as to the exact unloading point within the Kennedy Space Center.)

(End of clause)

INSPECTION AND ACCEPTANCE

ARTICLE E-1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

(52.246-3) INSPECTION OF SUPPLIES – COST REIMBURSEMENT (MAY 2001)
(52.246-5) INSPECTION OF SERVICES – COST REIMBURSEMENT (APR 1984)

SECTION F OF NAS10-02001

DELIVERIES OR PERFORMANCE

ARTICLE F-1 KSC 52.212-90 CONSIGNMENT ADDRESS (SEP 1998)

Ship To: Transportation Officer, NASA
J-BOSC Warehouse, Bldg. M6-744
Kennedy Space Center, Florida 32899

Note: See Section D for special marking instructions that may be required.

ARTICLE F-2 KSC 52.212-91 DELIVERY INSTRUCTIONS (FEB 1991)

Deliveries must be made to the receiving activity located in Building M6-744, J-BOSC Warehouse, John F. Kennedy Space Center, Florida. Unless the Contracting Officer has authorized deliveries to be made at other times because of an emergency requirement, vendor deliveries will be accepted only during normal operating hours which are from 07:20 a.m. to 03:30 p.m. daily excepting Saturdays, Sundays and legal holidays.

ARTICLE F-3 KSC 52.212-92 PLACE OF PERFORMANCE (FEB 1990)

The place of performance shall be the John F. Kennedy Space Center (KSC), Cape Canaveral Air Force Station (CCAFS), Florida; Dryden Flight Research Center, Edwards Air Force Base, CA (DFRC); Vandenberg Air Force Base, CA; Avon Park Air Force Range, Florida; and at such other locations as may be approved in writing by the Contracting Officer.

ARTICLE F-4 KSC 52.247-97 SHIPPING INSTRUCTIONS (FOREIGN PURCHASES) (NOV 2000)

SHIP BY: U. S. Customs Bonded Carrier

SHIP TO: Transportation Officer, NASA
JBOSC Warehouse, Building M6-744
Kennedy Space Center FL 32899
c/o U. S. Customs Office
Port Canaveral FL

ARTICLE F-5 KSC 52.247-99 FREIGHT SHIPMENTS (NOV 2000)

Reduced transportation rates accorded the Government under Section 22 of the Interstate Commerce Act are properly applicable to Commercial Bills of Lading covering property shipments moving under cost reimbursement type Government contracts when the contract provides for direct reimbursement by the Government of all transportation costs and such costs

are allowable.

The following is applicable to freight shipments of 20,000 pounds or more by surface transportation or 5,000 pounds or more by air movement when the transportation costs are directly reimbursable by the Government and such costs are allowable:

a. When the Contracting Officer has authorized the Contractor to utilize Commercial Bills of Lading with application of Section 22 rates for freight shipments instead of shipment on Government Bills of Lading and/or conversion of Commercial Bills of Lading to Government Bills of Lading, the contractor will inform the KSC Transportation Office, TA-E1, Kennedy Space Center, Florida, telephone number 321-867-2975, of each planned movement. That office will furnish the contractor with pertinent information including name of carriers (by origin) providing service under Section 22 rates, citation of applicable tariff and such other support or guidance that is requested.

b. The original and all copies of the Carrier's Bills of Lading will be annotated with the following statement: "Transportation hereunder is for the Government and the actual total transportation charges paid to the carrier(s) are to be reimbursed by the Government."

c. One (1) copy of all Carrier's Bills of Lading for freight shipments will be furnished the KSC Transportation Office, TA-E1, Kennedy Space Center, Florida when total transportation costs are to be reimbursed by the Government.

ARTICLE F-6 PERIOD OF PERFORMANCE

The initial period of performance for this contract shall be January 1, 2002, through September 30, 2005. Pursuant to the option provision to extend the term of the contract, the following options are exercised:

Option Period	Date Exercised	Contract Modification Number
TBD	TBD	TBD
TBD	TBD	TBD

SECTION G OF NAS10-02001

CONTRACT ADMINISTRATION DATA

ARTICLE G-1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

None

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) CLAUSES

(1852.227-11) PATENT RIGHTS – RETENTION BY THE CONTRACTOR (SHORT FORM)
(1852.227-70) NEW TECHNOLOGY (NOV 1998)
(1852.227-86) COMMERCIAL COMPUTER SOFTWARE LICENSING (DEC 1987)
(1852.242-73) NASA CONTRACTOR FINANCIAL MANAGEMENT REPORTING (JUL 2000)

ARTICLE G-2 NFS 1852.216-76 AWARD FEE FOR SERVICES CONTRACTS (JUNE 2000) (MODIFIED)

(a) The contractor can earn award fee from a minimum of zero dollars to the maximum stated in NASA FAR Supplement clause 1852.216-85, "Estimated Cost and Award Fee" in this contract.

(b) The initial performance evaluation will take place nine months after full performance begins. Following the initial evaluation, the Government shall evaluate the Contractor's performance every 12 months to determine the amount of award fee earned by the contractor during the period. The Contractor may submit a self-evaluation of performance for each evaluation period under consideration. These self-evaluations will be considered by the Government in its evaluation. The Government's Fee Determination Official (FDO) will determine the award fee amounts based on the Contractor's performance in accordance with the Government's "Performance Evaluation and Award Fee Plan." The plan may be revised unilaterally by the Government prior to the beginning of any rating period to redirect emphasis.

(c) The Government will advise the Contractor in writing of the evaluation results. The Accounts Payable Section, Code GG-B-C2, will make payment based on issuance of a unilateral modification by contracting officer.

(d) After 85% of the potential award fee has been paid, the Contracting Officer may direct the withholding of further payment of award fee until a reserve is set aside in an amount that the Contracting Officer considers necessary to protect the Government's interest. This reserve shall not exceed 15 percent of the total potential award fee.

(e) The amount of award fee which can be awarded in each evaluation period is limited to the amounts set forth elsewhere in this contract. Award fee which is not earned in an evaluation period cannot be reallocated to future evaluation periods.

(f)(1) Provisional award fee payments will be made under this contract pending the determination of the amount of fee earned for an evaluation period. If applicable, provisional award fee payments will be made to the Contractor on a monthly basis. The total amount of award fee available in an evaluation period that will be provisionally paid is the lesser of 80% or the prior period's evaluation score.
(2) Provisional award fee payments will be superseded by the final award fee evaluation for that period. If provisional payments exceed the final evaluation score, the Contractor will either credit the next payment voucher for the amount of such overpayment or refund the difference to the Government, as directed by the Contracting Officer.
(3) If the Contracting Officer determines that the Contractor will not achieve a level of performance commensurate with the provisional rate, payment of provisional award fee will be discontinued or reduced in such amounts as the Contracting Officer deems appropriate. The Contracting Officer will notify the Contractor in writing if it is determined that such discontinuance or reduction is appropriate. This determination is not subject to the Disputes clause.
(4) Provisional award fee payments will not be made prior to the first award fee determination by the Government.
(g) Award fee determinations made by the Government under this contract are not subject to the Disputes clause.

(End of clause)

ARTICLE G-3 NFS 1852.216-87 SUBMISSION OF VOUCHERS FOR PAYMENT (MARCH 1998)

(a) The designated billing office for cost vouchers for purposes of the Prompt Payment clause of this contract is indicated below. Public vouchers for payment of costs shall include a reference to the number of this contract.

(b) (1) If the contractor is authorized to submit interim cost vouchers directly to the NASA paying office, the original voucher should be submitted to:

John F. Kennedy Space Center, NASA
Accounting Control and Reporting Branch
GG-B1-A
Kennedy Space Center, Fl 32899

(2) For any period that the Defense Contract Audit Agency has authorized the Contractor to submit interim cost vouchers directly to the Government paying office, interim vouchers are not required to be sent to the Auditor, and are considered to be provisionally approved for payment, subject to final audit.

(3) Copies of vouchers should be submitted as directed by the Contracting Officer.

(c) If the contractor is not authorized to submit interim cost vouchers directly to the paying office as described in paragraph (b), the contractor shall prepare and submit vouchers as follows:

(1) One original Standard Form (SF) 1034, SF 1035, or equivalent Contractor's

CONTRACT ADMINISTRATION DATA

attachment to:

[NASA or DCAA mailing office address to be provided at time of award]

(2) Five copies of SF 1034, SF 1035A, or equivalent Contractor's attachment to the following offices by insertion in the memorandum block of their names and addresses:

(i) Copy 1 NASA Contracting Officer
(ii) Copy 2 Auditor
(iii) Copy 3 Contractor
(iv) Copy 4 Contract administration office; and
(v) Copy 5 Project management office.

(3) The Contracting Officer may designate other recipients as required.

(d) Public vouchers for payment of fee shall be prepared similarly to the procedures in paragraphs (b) or (c) of this clause, whichever is applicable, and be forwarded to:

John F. Kennedy Space Center, NASA
Attn: Contracting Officer, OP-OS
Kennedy Space Center, FL 32899

This is the designated billing office for fee vouchers for purposes of the Prompt Payment clause of this contract.

(e) In the event that amounts are withheld from payment in accordance with provisions of this contract, a separate voucher for the amount withheld will be required before payment for that amount may be made.

(End of clause)

ARTICLE G-4 NFS 1852.227-72 DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND PATENT REPRESENTATIVE (JULY 1997)

(a) For purposes of administration of the clause of this contract entitled "New Technology" or "Patent Rights--Retention by the Contractor (Short Form)," whichever is included, the following named representatives are hereby designated by the Contracting Officer to administer such clause:

Title	Office Code	Address
New Technology Representative	YA-C1	John F. Kennedy Space Center, NASA Attn: David Makufka Technology Transfer Officer YA-C1 Kennedy Space Center, FL 32899

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Title	Office Code	Address
Patent Representative	CC-A	John F. Kennedy Space Center, NASA Attn: Randall Heald Patent Counsel CC-A Kennedy Space Center, FL 32899

(b) Reports of reportable items, and disclosure of subject inventions, interim reports, final reports, utilization reports, and other reports required by the clause, as well as any correspondence with respect to such matters, should be directed to the New Technology Representative unless transmitted in response to correspondence or request from the Patent Representative. Inquiries or requests regarding disposition of rights, election of rights, or related matters should be directed to the Patent Representative. This clause shall be included in any subcontract hereunder requiring a "New Technology" clause or "Patent Rights--Retention by the Contractor (Short Form)" clause, unless otherwise authorized or directed by the Contracting Officer. The respective responsibilities and authorities of the above-named representatives are set forth in 1827.305-370 of the NASA FAR Supplement.

(End of clause)

ARTICLE G-5 RESERVED

ARTICLE G-6 NFS 1852.245-71 INSTALLATION-ACCOUNTABLE GOVERNMENT PROPERTY (JUNE 1998)

a) The Government property described in the clause at 1852.245-77, List of Installation-Accountable Property and Services, shall be made available to the Contractor on a no-charge basis for use in performance of this contract. This property shall be utilized only within the physical confines of the NASA installation that provided the property. Under this clause, the Government retains accountability for, and title to, the property, and the Contractor assumes the following user responsibilities:

The Contractor shall assume the responsibilities as custodian / user as defined in NPG 4200.

The contractor shall establish and adhere to a system of written procedures for compliance with these user responsibilities. Such procedures must include holding employees liable, when appropriate, for loss, damage, or destruction of Government property.
(b)(1) The official accountable recordkeeping, physical inventory, financial control, and reporting of the property subject to this clause shall be retained by the Government and accomplished by the installation Supply and Equipment Management Officer (SEMO) and Financial Management Officer. If this contract provides for the contractor to acquire property, title to which will vest in the Government, the following additional procedures apply:

(i) The contractor's purchase order shall require the vendor to deliver the property to the installation central receiving area;

(ii) The contractor shall furnish a copy of each purchase order, prior to delivery by the vendor, to the installation central receiving area:

(iii) The contractor shall establish a record of the property as required by FAR 45.5 and 1845.5 and furnish to the Industrial Property Officer a DD Form 1149 Requisition and Invoice/Shipping Document (or installation equivalent) to transfer accountability to the Government within 5 working days after receipt of the property by the contractor. The contractor is accountable for all contractor-acquired property until the property is transferred to the Government's accountability.

(iv) Contractor use of Government property at an off-site location and off-site subcontractor use require advance approval of the contracting officer and notification of the SEMO. The contractor shall assume accountability and financial reporting responsibility for such property. The contractor shall establish records and property control procedures and maintain the property in accordance with the requirements of FAR Part 45.5 until its return to the installation.

(2) After transfer of accountability to the Government, the contractor shall continue to maintain such internal records as are necessary to execute the user responsibilities identified in paragraph (a) and document the acquisition, billing, and disposition of the property. These records and supporting documentation shall be made available, upon request, to the SEMO and any other authorized representatives of the contracting officer.

(End of Clause)

ARTICLE G-7 NFS 1852.245-77 LIST OF INSTALLATION-PROVIDED PROPERTY AND SERVICES (JULY 1997)

In accordance with the clause at 1852.245-71, Installation-Accountable Government Property, the Contractor is authorized use of the types of property and services listed below, to the extent they are available, in the performance of this contract within the physical borders of the installation which may include buildings and space owned or directly leased by NASA in close proximity to the installation, if so designated by the Contracting Officer.

(a) Office space, work area space, and utilities. Government telephones are available for official purposes only; pay telephones are available for contractor employees for unofficial calls.

(b) General- and special-purpose equipment, including office furniture.

(1) Equipment to be made available is listed in Section J, Attachment I, Appendix 4. The Government retains accountability for this property under the clause at 1852.245-71, Installation-Accountable Government Property, regardless of its authorized location.

(2) If the Contractor acquires property, title to which vests in the Government pursuant to other provisions of this contract, this property also shall become accountable to the Government upon its entry into Government records as required by the clause at 1852.245-71, Installation-Accountable Government Property.

(3) The Contractor shall not bring to the installation for use under this contract any property owned or leased by the Contractor, or other property that the Contractor is accountable for under any other Government contract, without the Contracting Officer's prior written approval.

(c) Supplies from stores stock.

(d) Publications and blank forms stocked by the installation.

(e) Safety and fire protection for Contractor personnel and facilities.

(f) Installation service facilities: See Section J, Attachment I, APpendix 7

(g) Medical treatment of a first-aid nature for Contractor personnel injuries or illnesses sustained during on-site duty.

(h) Cafeteria privileges for Contractor employees during normal operating hours.

(i) Building maintenance for facilities occupied by Contractor personnel.

(j) Moving and hauling for office moves, movement of large equipment, and delivery of supplies. Moving services shall be provided on-site, as approved by the Contracting Officer.

(k) The user responsibilities of the Contractor are defined in paragraph (a) of the clause at 1852.245-71, Installation-Accountable Government Property.

(End of clause)

ARTICLE G-8 KSC 52.216-90 PAYMENT PROVISIONS (CPAF) (SEP 1998)

A. Costs: Pursuant to the Allowable Cost and Payment clause of this contract, cost invoices shall be submitted by the Contractor on Standard Form 1034. Three (3) copies of each invoice, except the final voucher, shall be submitted to the cognizant Defense Contract Audit Agency Office for provisional approval and transmittal to the payment office. The final voucher shall be submitted to the Contracting Officer.

B. Award Fee:

1. Pursuant to the clause 1852.216-76, Award Fee for Service Contracts, the amount of

award fee earned, when determined, shall be reflected in a unilateral contract modification issued by the Contracting Officer. The payment office will make payment based on the unilateral modification.

(End of Clause)

ARTICLE G-9 TRAVEL OUTSIDE OF THE UNITED STATES

The Contractor is responsible for all arrangements associated with employee travel while in performance of support under this contract.

The Contractor shall submit a travel report within 30 days after conclusion of the travel required to support the activities listed in the Attachment I, Statement of Work, and its addendum, to the Contracting Officer's Technical Representative with a copy to the Contracting Officer.

(End of text)

SECTION H OF NAS10-02001
SPECIAL CONTRACT REQUIREMENTS

ARTICLE H-1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following contract clauses pertinent to this section are herby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

None

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) CLAUSES

(1852.204-74)	CENTRAL CONTRACTOR REGISTRATION (AUG 2000)
(1852.223-70)	SAFETY AND HEALTH (MAY 2001)
(1852.223-75)	MAJOR BREACH OF SAFETY OR SECURITY (MAY 2001)
(1852.223-74)	DRUG AND ALCOHOL FEE WORKPLACE (MAR 1996)
(1852.225-70)	EXPORT LICENSES (FEB 2000)
(1852.228-75)	MINIMUM INSURANCE COVERAGE (OCT 1988)
(1852.246-70)	MISSION CRITICAL SPACE SYSTEMS PERSONNEL RELIABILITY PROGRAM (MAR 1997)
(1852.247-71)	PROTECTION OF THE FLORIDA MANATEE (MAR 1989)

ARTICLE H-2 NFS 1852.235-71 KEY PERSONNEL AND FACILITIES (MAR 1989)

(a) The personnel and/or facilities listed below (or specified in the contract Schedule) are considered essential to the work being performed under this contract. Before removing, replacing, or diverting any of the listed or specified personnel or facilities, the Contractor shall (1) notify the Contracting Officer reasonably in advance and (2) submit justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact on this contract.

(b) The Contractor shall make no diversion without the Contracting Officer's written consent; provided, that the Contracting Officer may ratify in writing the proposed change, and that ratification shall constitute the Contracting Officer's consent required by this clause.

(c) The list of personnel and/or facilities (shown below or as specified in the contract Schedule) may, with the consent of the contracting parties, be amended from time to time during the course of the contract to add or delete personnel and/or facilities.

Name	Title
Douglas L. Britt	LSSC Project Director; Dynamac Sr. Vice President
	Manager, Biological Programs, Deputy Project Director and Dynamac Chief Scientist
	Facilities/Laboratory Utilization Manager
	Manager. Aerospace Medicine Spaceport Services
	Manager, Payload Development Programs
	Technical Lead, Ground Research & Spaceport Technology Development
	Director, Occupational Health Program Assessment

clause)

ARTICLE H-3 NFS 1852.237-70 EMERGENCY EVACUATION PROCEDURES (DEC 1988)

The contractor shall assure that its personnel at Government facilities are familiar with the functions of the Government's emergency evacuation procedures. If requested by the Contracting Officer, the Contractor shall designate an individual or individuals as contact points to provide for efficient and rapid evacuation of the facility if and when required.

(End of clause)

ARTICLE H-4 NFS 1852.242-72 OBSERVANCE OF LEGAL HOLIDAYS (AUG 1992), ALTERNATE II (OCT 2000)

(a) The on-site Government personnel observe the following holidays:

New Year's Day
Labor Day
Martin Luther King, Jr.'s Birthday
Columbus Day
President's Day
Veterans Day
Memorial Day
Thanksgiving Day
Independence Day
Christmas Day
Any other day designated by Federal statute, Executive order, or the President's proclamation.

(c) When any holiday falls on a Saturday, the preceding Friday is observed. When any holiday falls on a Sunday, the following Monday is observed. Observance of such days by Government personnel shall not by itself be cause for an additional period of performance or entitlement of compensation except as set forth within the contract.

(d) When the NASA installation grants administrative leave to its Government employees (e.g., as a result of inclement weather, potentially hazardous conditions, or other special circumstances), Contractor personnel working on-site should also be dismissed. However, the contractor shall provide sufficient on-site personnel to perform round-the-clock requirements of critical work already in process, unless otherwise instructed by the Contracting Officer or authorized representative.

(e) Whenever administrative leave is granted to Contractor personnel pursuant to paragraph (e) of above, it shall be without loss to the Contractor. The cost of salaries and wages to the Contractor for the period of any such excused absence shall be a reimbursable item of cost under this contract for employees in accordance with the Contractor's established accounting policy.

(End of Clause)

ARTICLE H-5 KSC 52.204-90 SECURITY CONTROLS AT KSC (NOV 2000)

A. Identification of Employees

1. The contractor shall require each employee engaged on the work site to display NASA-furnished identification badges and special access badges at all times. The contractor shall obtain and submit badging request forms for each person employed or to be employed by the contractor under this contract. The contractor shall designate its own security and badging officials to act as points-of-contact for the KSC Security Office. Prior to proceeding with onsite performance, the contractor shall submit the following information to the Protective Services Branch, Code TA-E2, Kennedy Space Center:

a. Contract number and location of work site(s)
b. Contract commencement and completion dates
c. Status as prime or subcontractor
d. Names of designated security and badging officials

2. Identification and badging of employees shall be accomplished as soon as practicable after award of the contract. During performance of the contract, the contractor shall, upon termination of an employee, immediately deliver badges and/or passes issued to the employee to the NASA Security Office. It is agreed and understood that all NASA identification badges/passes remain the property of NASA, and the Government reserves the right to invalidate such badges/passes at any time.

B. Access to Controlled Areas within KSC

1. Certain areas within KSC have been designated as Controlled Areas. These are normally surrounded by fencing and have an entrance gate monitored by a guard or monitoring device. Access into such areas is classified into "escorted" or "unescorted" access. For each employee for which the contractor desires to have unescorted access, the prescribed forms must be submitted to the NASA Security Office. Due to the time required to process requests for unescorted access, the contractor is advised to complete and submit the required forms as soon as practicable after contract award. Within 14 working days after the receipt of the forms, the NASA Security Office will determine whether the person is eligible for unescorted access.

2. The prime contractor is responsible for providing escort services for any of his employees and/or any subcontractor employees who are not eligible for unescorted access.

3. All requests for unescorted access by subcontractors will be submitted through the prime contractor for forwarding to the NASA Security Office.

(End of Clause)

ARTICLE H-6 KSC 52.208-90 MOTOR VEHICLE MANAGEMENT (APR 2001)

The contractor shall acquire and manage motor vehicles necessary to support the performance of the contract. Such needed vehicles are to be acquired and managed in the manner most efficient and economic to the Government. Vehicles may be obtained from the GSA Interagency Motor Pool, commercial sources, or other sources. Costs related to motor vehicles shall be borne by the contractor and reimbursed by the Government to the extent allowable in accordance with the terms of the contract relating to the reimbursement of costs.

The contractor will use KSC Form 7-490 (KSC Vehicle Use Record) to record vehicle utilization for all GSA and commercial rental vehicles. These records will be maintained and made available at the request of the Contracting Officer for a period of 18 months. Two copies of the monthly billings, both GSA and commercial, for motor vehicle services will be forwarded to the Contracting Officer each month with a copy to the KSC Transportation Office, Code TA. The contractor shall assure that all vehicle operators are appropriately licensed in the state. The contractor will furnish GSA a copy of their third party automobile insurance policy if acquiring GSA motor vehicles.

The contractor shall prepare and submit a Vehicle Utilization Plan (DRD 21) semiannually. One copy of the form shall be forwarded to the Contracting Officer, with a copy to KSC Transportation Office, Code TA. This plan shall, as a minimum, demonstrate the economic and efficient management of vehicles and fuel. It shall forecast the vehicle requirements for 2 years allowing at least 6 months advance notice for additional requirements. It shall demonstrate the techniques utilized by the contractor to assure that vehicles are used for official purposes only.

(End of Clause)

ARTICLE H-7 KSC 52.223-90 RADIATION PROTECTION (OCT 1998)

A. The Contractor agrees to comply with the requirements of:

(1) KHB 1860.1, KSC Ionizing Radiation Protection Program, KHB 1860.2, KSC Nonionizing Radiation Protection Program, and applicable Federal and State regulations for activities performed at the Kennedy Space Center, NASA facilities at Cape Canaveral Air Station and Vandenburg Air Force Station; and

(2) 45th Space Wing Instruction 40-201, Radiation Protection Program, in addition to those in (1) above for activities performed at the Cape Canaveral Air Station or Eastern Test Range.

B. The Contractor further agrees to submit data and information regarding compliance with (1) and (2) above in addition to the names of laboratories to perform activities, for the Contracting Officer's approval, within thirty days after award of contract.

(End of Clause)

ARTICLE H-8 KSC 52.223-93 OCCUPATIONAL HEALTH (NOV 2000)

1. Occupational Health Services

The medical services set forth in KMI 1810.1I entitled KSC Occupational Medicine Program, will be provided to the contractor by the Government to the extent that there will not be any restriction of the employees' rights under applicable Workmen's Compensation statutory provisions.

Information from records generated as a result of rendition of these medical services may be obtained from the Chief, Aerospace Medicine and Occupational Health Branch, Code TA-C2, upon written request.

2. Health Examinations and Physical Requirements Standards

The contractor shall provide the following data to the Chief, Aerospace Medicine and Occupational Health Branch, Code TA-C2:

a. A breakdown of the various health examinations required in support of this contract; providing type, frequency, and a roster of personnel affected.

b. The applicable physical requirements standards for personnel certification, if the contractor has physical requirements standards which are stricter than the applicable KSC (Federal) standards; otherwise the KSC (Federal) physical requirements standards are applicable to this contract.

(End of Clause)

ARTICLE H-9 KSC 52.223-94 HAZARD COMMUNICATIONS (NOV 2000)

A. In order to comply with Federal, OSHA, and State Regulations, the Contractor shall participate in the KSC Chemical Hazard Communication Program as implemented by KMI 1800.2B, Chemical Hazard Communication.

B. The Contractor shall coordinate submission of hazardous material safety data, to the NASA/KSC Materials Safety Data Sheet Archive, with the Joint Base Operations Support Contract MSDS Program Administrator.

(End of Clause)

ARTICLE H-10 **KSC 52.223-105 EMERGENCY MEDICAL TREATMENT (JUL 2000)**

The contractor shall immediately call (see below for applicable telephone numbers) for assistance with personnel injury or illness for any incident requiring emergency medical treatment for contractor or subcontractor personnel, or invitees on KSC, or if any person on the job site is rendered unconscious. The contractor shall require the victim to sign an appropriate "refusal of treatment" form, if medical evaluation/treatment is offered and refused.

From KSC or CCAFS property: 911

From a KSC issued cellular telephone: 867-7911

From other than a KSC issued cellular telephone: 321-867-7911

Commercial telephone users on KSC or CCAFS property: 911

(End of Clause)

ARTICLE H-11 **KSC 52.236-130 CONDUCT OF FACILITY PROJECTS (APR 2000)**

A. Approval

The contractor shall not award or otherwise proceed with implementation of any facility project without a NASA approved Facility Project – Brief Project Document (NASA Form 1509). The contractor shall prepare or otherwise support the preparation of NASA Form 1509's in accordance with the current edition of NPG 8820.2, Facility Project Implementation Handbook, and the current version of the KSC procedure for Facility Project Approval and Implementation. For purposes of this requirement a Facility Project is defined as any new construction, repair, and /or modification affecting Government real property located on KSC regardless of the source of funding, or located elsewhere and funded by KSC, and costing more than $50,000. Planning and design activities leading to the implementation of the actual construction, repair or modification work normally can be accomplished prior to 1509 approval. When in doubt, guidance as to whether or not a particular activity is a Facility Project, is "implementation" versus "planning and design," and / or the applicability of this requirement in relation to specific projects should be obtained from the KSC Spaceport Services Management Integration Office.

B. File Documentation

Construction subcontract file documentation shall include a copy of the approved NASA Form 1509 authorizing the project. For construction subcontracts requiring Contracting Officer consent, the consent file shall include a copy of the approved NASA Form 1509 authorizing the project.

(End of Clause)

ARTICLE H-12 KSC 52.242-90 CONTROLS APPLICABLE TO CONTRACTOR'S ACTIVITIES (DEC 2000)

The below listed Kennedy Space Center publications and subsequent revisions thereof are applicable to this contract and are incorporated herein by reference. These publications prescribe regulatory procedural criteria, which are applicable to the contractor. The contractor, upon receipt of notice of noncompliance with any provisions of the below listed publications from the Contracting Officer or his representatives, shall promptly take corrective action.

JHB 2000	"Consolidated Comprehensive Emergency Management Plan"
KHB 1200.1	"Management of Facilities, Systems & Equipment Handbook"
KHB 1610.1	"KSC Security Handbook"
KHB 1710.2	"Kennedy Space Center Safety Practices Handbook"
KMI 1710.18	"KSC Safety Assurance Policy:
KMI 1800.2	"KSC Hazard Communication Program"
KMI 1810.1 Rev I	"KSC Occupational Medicine Program" (On-site Contractors shall comply with Attachment D, KSC Skin Cancer Prevention Program)
KHB 1820.3	"KSC Hearing Loss Prevention Program"
KHB 1820.4	"KSC Respiratory Protection Program"
KHB 1840.1	"Industrial Hygiene Handbook"
KMI 1860.1	"KSC Radiation Protection Program"
KHB 1870.1	"KSC Sanitation and Pollution Control Handbook"
KHB 2570.1	"KSC Radio Frequency Spectrum Management Handbook"
KHB 4000.1	"Supply Support System Manual, Part 5, Equipment Management"
KHB 8800.6	"KSC Environmental Control Handbook"

KHB 8800.7 "Hazardous Waste Management"

KMI 8800.8 "KSC Environmental Management"

(End of Clause)

ARTICLE H-13 KSC 52.242-93 CENTERWIDE MANPOWER REPORTS (NOV 2000)

The Contractor shall submit, on a quarterly basis, a manpower report delineating information about its workforce. The report shall include: the contract number, the contractor's total on-site workforce, total on-site union represented employees by bargaining unit, total on-site non-union represented employees, and total off-site workforce performing on the contract. The Contractor shall provide this information no later than 10 days after the close of each reporting period which end March 31st, June 30th, September 30th , and December 31st. The report shall be submitted to the Contracting Officer with copies to KSC Administration Office, Management Planning (Code HM-E) and Industry Relations and Outreach (Code HM-B.)

(End of Clause)

ARTICLE H-14 KSC 52.243-90 AUTHORIZED CHANGES (FEB 1990)

The Contracting Officer or his duly appointed representative are the only individuals authorized to issue instructions to the contractor in matters relating to this contract. The identification, scope of authority and duties of representatives of the Contracting Officer shall be set forth in letters issued by the Contracting Officer and copies of such designations shall be furnished to the Contractor.

(End of Clause)

ARTICLE H-15 BASE SUPPORT

A. It is the Government's policy to furnish, to the maximum practicable extent and on a no-charge-for-use basis, available property, equipment, and services for on-site use. Therefore, to avoid unnecessary duplication of facilities and capabilities, the Contractor shall utilize available assigned Government facilities, equipment, tools, supplies, materials, hardware and services as specified in the attachments of this contract; and KHB 4000.1C w.ch 3, entitles "Supply Support System Manual", and KHB 8610.1D w/ch 1, entitled "Support Services Handbook".

Property items provided in accordance with the provisions of this clause will be subject to the provisions of article G-7 entitled "List of Installation-Provided Property and Services".

B. In the event that the Government is unable to provide the items specified in paragraph

A above, or in the event the items are not available in a timely manner through Government resources, such items as are required in the performance of this contract may be procured by the Contractor with the prior written approval of the Contracting Officer or a designated approving official appointed by the Contracting Officer.

C. The Contractor agrees to make every reasonable effort to anticipate and make known to the Government what its requirements are sufficiently in advance to permit the Government to fulfill them in a timely manner in order to minimize Contractor procurement.

D. Items generally considered "Fixtures" (e.g., becomes a part of the premises when installed, such as water coolers, air-conditioners, partitions) shall not be purchased by the Contractor under the authority of this clause. Additionally, items of a capital nature shall not be purchased under the authority of this clause without the prior written approval of the Contracting Officer.

E. Administrative desktop computer seats will be provided to the Contractor as base support through the NASA ODIN Contract.

F. NASA will provide Industrial Hygiene (IH) services through the Joint Base Operations and Support Contract (J-BOSC) contractor as defined in Attachment J-1 of NASA contract NAS10-99001. These services are provided in support of the KSC Industrial Hygiene Program Office to include IH program consultation, occupational health compliance audits of workplaces and work practices to include asbestos abatement, and laboratory services.

G. J-BOSC IH support can also include, at the discretion of the NASA health and safety organization, support to hazardous operations to ensure unprotected personnel are not affected, baseline industrial hygiene evaluations of workplaces, investigations of potential employee exposures to hazardous materials and physical agents (including ergonomic assessment), and investigation of employee complaints of potential workplace hazards including indoor air quality complaints. Other services that may be utilized include confined space evaluations, specialized support to launch, landing, and processing operations, air monitoring services to sample and analyze air contaminants (including asbestos), sampling and analysis of bulk presumed asbestos containing materials, and exhaust ventilation system testing.

H. NASA will provide Health Physics (HP) services through the J-BOSC contractor as defined in Attachment J-1 of NASA contract NAS10-99001. These services are provided in support of the KSC Health Physics Program Office to include HP program consultation, compliance audits to ensure appropriate use and storage of radiation sources, identification and control of radiological health hazards, hazard evaluation and review of current and proposed uses of radiation sources, ionizing radiation dosimetry, handling, collection and storage and disposal of low level radioactive waste, health physics laboratory services, and emergency response

capability.

(End of text)

ARTICLE H-16 PERMITS AND LICENSES

The Contractor shall procure and keep effective all necessary permits and licenses required by the Federal, State, or local Government or subdivision thereof, or of any other duly construed public authority in performance of the work unless otherwise directed by the Contracting Officer, and shall obey and abide by all applicable laws, regulations or ordinances.

Any permit involving environmental coordination shall be submitted through the Environmental Program Office (TA-C3).

(End of text)

ARTICLE H-17 PHASE IN PERIOD

The Contractor shall assume contract responsibility for all the requirements of this contract on January 01, 2002. During the period from contract award through 12/31/01 (NTE 30 days) under a not-to-exceed amount of $32,669, the Contractor shall accomplish phase-in and training of Contractor personnel as required for the assumption of full contract responsibility. The Contractor shall not charge the Government nor be reimbursed for costs in excess of this not-to-exceed amount incurred for phase-in and training during said phase-in period.

(End of text)

ARTICLE H-18 PROCUREMENT AUTHORITY

The LSSC Contractor shall purchase items with a value equal or less than $100,000 for use in connection with work being performed under the contract. This procurement authority excludes installation provided property and services (Article G-7). The Contractor is required to provide a monthly purchase order report (DRD-23) that summarizes the purchasing activity under the contract including the percentage awarded to small businesses, small disadvantage businesses, woman owned small businesses, and hub-zone businesses.

The LSSC and NASA project managers and the NASA Contracting Officer's Technical Representative shall approve all procurements over $5,000 prior to placement of the order. A complete procurement package with documentation supporting all the elements identified in FAR 44.202-2 shall be presented to the Contracting Officer for consent of all subcontracts over $25,000, and all labor hour subcontracts of any value. The consent package shall be submitted with a cover letter that has been signed by all individuals identified in this paragraph and the NASA Resources Analyst with a statement that they have reviewed and approve the procurement.

(End of text)

ARTICLE H-19 MANAGEMENT AND PROTECTION OF DATA OF THIRD PARTIES

A. In performance of this contract it is anticipated that the Contractor may have access to, be furnished, use, or generate the following types of data (recorded information):
   1. Data of third parties bearing limited rights or restricted rights notices submitted either to NASA or directly to the Contractor; or
   2. Other data of third parties which NASA has agreed to handle under protective arrangements; or
   3. Data generated by NASA or the Contractor for third parties which NASA intends to control the use and dissemination thereof until delivered to the third parties.

B. In order to protect the interest of the Government and the interests of the other owners of such data, the Contractor agrees with respect to data in category 1. above, and with respect to any data in categories 2. and 3. when so identified by the Contracting Officer, to:
   1. Use and disclose such data only to the extent necessary to perform the work required under this contract, with particular emphasis on restricting the data to employees having a "need to know";
   2. Preclude disclosure of such data outside Contractor's organization performing work under this contract without written consent of the Contracting Officer; and
   3. Return or dispose of such data as directed by the Contracting Officer or the furnishing third party owner when such data is no longer needed for contract performance.

(End of Clause)

ARTICLE H-20 NFS 1852.209-71 LIMITATION OF FUTURE CONTRACTING (DEC 1988)

(a) The Contracting Officer has determined that this acquisition may give rise to a potential organizational conflict of interest. Accordingly, the attention of the prospective offerors is invited to FAR Subpart 9.5 –Organizational Conflicts of Interest.

(b) The nature of this conflict is a possible unfair competitive advantage.

(c) The restrictions upon future contracting are as follows:

(1) If the Contractor, under the terms of this contract, or through the performance of tasks pursuant to this contract, is required to develop specifications or statements of work that are to be incorporated into a solicitation, the Contractor shall be ineligible to perform the work described in that solicitation as a prime or first-tier subcontractor under an ensuing NASA contract. This restriction shall remain in effect for a reasonable time, as agreed to by the Contracting Officer and the Contractor, sufficient to avoid unfair competitive advantage or potential bias (this time shall in no case be less than the duration of the initial production contract). NASA shall not unilaterally require the Contractor to prepare such specifications or statements of work under this contract.

(2) To the extent that the work under this contract requires access to proprietary, business confidential, or financial data of other companies, and as long as these data remain

proprietary or confidential, the Contractor shall protect these data from unauthorized use and disclosure and agrees not to use them to compete with those other companies.

(End of Clause)

CONTRACT CLAUSES

ARTICLE I-1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

(52.202-1)	DEFINITIONS (MAY 2001)
(52.203-3)	GRATUITIES (APR 1984)
(52.203-5)	COVENANT AGAINST CONTINGENT FEES (APR 1984)
(52.203-6)	RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT (JUL 1995)
(52.203-7)	ANTI-KICKBACK PROCEDURES (JUL 1995)
(52.203-8)	CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)
(52.203-10)	PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)
(52.203-12)	LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (JUN 1997)
(52.204-2)	SECURITY REQUIREMENTS (AUG 1996)
(52.204-4)	PRINTING/COPYING DOUBLE SIDED ON RECYCLED PAPER (AUG 2000)
(52.209-6)	PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (JUL 1995)
(52.211-15)	DEFENSE PRIORITY AND ALLOCATION REQUIREMENTS (SEPT 1990)
(52.215-2)	AUDIT AND RECORDS--NEGOTIATION (JUNE 1999)
(52.215-8)	ORDER OF PRECEDENCE--UNIFORM CONTRACT FORMAT (OCT 1997)
(52.215-11)	PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA—MODIFICATIONS (OCT 1997)
(52.215.13)	SUBCONTRACTOR COST OR PRICING DATA—MODIFICAITONS (OCT 1997)
(52.215-15)	PENSION ADJUSTMENTS AND ASSET REVERSIONS (DEC 1998)
(52.215-18)	REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS (PRB) OTHER THAN PENSIONS (OCT 1997)
(52.215-19)	NOTIFICATION OF OWNERSHIP CHANGES (OCT 1997)
(52.215-21)	REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA—MODIFICATIONS (OCT 1997)
(52.216-7)	ALLOWABLE COST AND PAYMENT (MAR 2000)
(52.217-8)	OPTION TO EXTEND SERVICES (NOV 1999) Insert "within the last six months of performance" in the fill-in space.
(52.217-9)	OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000) Insert "within the last six months of performance" and "at least 60 days", respectively, into the two paragraph (a) fill-in spaces. Insert "eight years, four months" into the paragraph (b) fill-in space.
(52.219-6)	NOTICE OF TOTAL SMALL BUSINESS SET-ASIDE (JUL 1996)
(52.219-8)	UTILIZATION OF SMALL BUSINESS CONCERNS (OCT 2000)
(52.219-14)	LIMITATION ON SUBCONTRACTING (DEC 1996)
(52.222-2)	PAYMENT OF OVERTIME PREMIUMS (JUL 1990) Insert "$0" in the paragraph (a) fill-in space.
(52.222-3)	CONVICT LABOR (AUG 1996)
(52.222-4)	CONTRACT WORK HOURS AND SAFETY STANDARDS ACT – OVERTIME COMPENSTATION (SEP 2000)
(52.222-21)	PROHIBITION OF SEGREGATED FACILITIES (FEB 1999)
(52.222-26)	EQUAL OPPORTUNITY (FEB 1999)

CONTRACT CLAUSES

(52.222-35)	AFFIRMATIVE ACTION FOR DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA (APR 1998)
(52.222-36)	AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES (JUN 1998)
(52.222-37)	EMPLOYMENT REPORTS ON DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA (JAN 1999)
(52.222-41)	SERVICE CONTRACT ACT OF 1965 (MAY 1989)
(52.223-3)	HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA (JAN 1997) *None*
(52.223-5)	POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION (APR 1998)
(52.223-6)	DRUG FREE WORK PLACE (MAY 2001)
(52.223-7)	NOTICE OF RADIOACTIVE MATERIALS (JAN 1997) Insert "30" into the paragraph (a) fill in.
(52.223-9)	ESTIMATE OF PERCENTAGE OF RECOVERED MATERIAL CONTENT FOR EPA-DESIGNATED PRODUCTS (AUG 2000)
(52.223-10)	WASTE REDUCTION PROGRAM (AUG 2000)
(52.223-11)	OZONE-DEPLETING SUBSTANCES (MAY 2001)
(52.223-12)	REFRIGERATION EQUIPMENT AND AC (MAY 1995)
(52.223-14)	TOXIC CHEMICAL RELEASE REPORTING (OCT 2000)
(52.225-13)	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES (JUL 2000)
(52.227-1)	AUTHORIZATION AND CONSENT (JUL 1995)
(52.227-2)	NOTICE AND ASSISTNACE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (AUG 1996)
(52.227-3)	PATENT INDEMNITY (APR 1984)
(52.227-11)	PATENT RIGHTS—RETENTION BY THE CONTRACTOR (SHORT FORM) (JUN 1997) as modified by NASA FAR Supplement 1852.227-11
(52.227-14)	RIGHTS IN DATA-GENERAL (JUN 1987) as modified by NASA FAR Supplement 1852.227-14 - as modified by ALTERNATE II (JUN 1987)
(52.228-7)	INSURANCE--LIABILITY TO THIRD PERSONS (MAR 1996)
(52.232-9)	LIMITATION ON WITHHOLDING OF PAYMENTS (APR 1984)
(52.232-17)	INTEREST (JUN 1996)
(52.232-18)	AVAILABILITY OF FUNDS (APR 1984)
(52.232-22)	LIMITATION OF FUNDS (APR 1984)
(52.232-23)	ASSIGNMENT OF CLAIMS (JAN 1986)
(52.232-25)	PROMPT PAYMENT (MAY 2001) (Alternate I) (NASA Modification) For interim payments under this cost-reimbursement service contract, the following paragraphs of the basic clause do not apply: (a)(2), (a)(4)(ii), (a)(4)(iii), and (a)(5)(i). Substitute the following paragraphs for (a)(1)(i) and (a)(3) of the basic clause: (a) Invoice payments – (1) Due date. (i) For purposes of computing late payment interest penalties that may apply, the due date for payment is the 30th day after the designated office receives a proper invoice. (a) (3) Contractor's invoice. Invoices for interim payments must be submitted to the office designated in the contract and comply with all other requirements as specified elsewhere in the contract. If the invoice does not comply with the contract requirements, it shall be returned within 7 days after the date the designated office received the invoice.
(52.232-34)	PAYMENT BY ELECTRONIC FUNDS TRANSFER--OTHER THAN CENTRAL CONTRACTOR REGISTRATION (MAY 1999)[para (b)(1) fill-in: "designated office"--Accounts Payable Section, Mail Code GG-B-2A, Kenndy Space Center) no later than concurrent with the first request for payment.]
(52.233-1)	DISPUTES (DEC 1998)
(52.233-3)	PROTEST AFTER AWARD (AUG 1996)--ALTERNATE I (JUN 1985)
(52.237-2)	PROTECTION OF GOVERNMENT BUILDINGS, EQUIPMENT, AND VEGETATION (APR 1984)
(52.237-3)	CONTINUITY OF SERVICES (JAN 1991)
(52.237-10)	IDENTIFICATION OF UNCOMPENSATED OVERTIME (OCT 1997)

CONTRACT CLAUSES

(52.239-1)	PRIVACY OR SECURITY SAFEGAURDS (AUG 1996)
(52.242-1)	NOTICE OF INTENT TO DISALLOW COSTS (APR 1984)
(52.242-3)	PENALTIES FOR UNALLOWABLE COSTS (MAY 2001)
(52.242-4)	CERTIFICATION OF FINAL INDIRECT COSTS (JAN 1997)
(52.242-13)	BANKRUPTCY (JUL 1995)
(52.242-15)	STOP WORK ORDER (AUG 1989) ALTERNATE I (APR 1984)
(52.243-2)	CHANGES--COST-REIMBURSEMENT (AUG 1987)-- ALTERNATE II (APR 1984)
(52.244-2)	SUBCONTRACTS (AUG 1998)--ALTERNATE I (AUG 1998) {paragraph (e) is "Professional and consultant costs as defined at FAR 31.205-33" and paragraph (k) is (None)
(52.244-5)	COMPETITION IN SUBCONTRACTING (DEC 1996)
(52.245-1)	PROPERTY RECORDS (APR 1984)
(52.245-5)	GOVERNMENT PROPERTY (COST REIMBURSEMENT, TIME-AND-MATERIAL, OR LABOR-HOUR CONTRACTS (JAN 1986) (DEVIATION) (JULY 1995) (As modified by NFS 18-52.245-71)
(52.246-25)	LIMITATION OF LIABILITY--SERVICES (FEB 1997)
(52.247-1)	COMMERCIAL BILL OF LADING NOTATIONS (APR 1984)
(52.247-63)	PREFERENCE FOR U.S.-FLAG AIR CARRIERS (JAN 1997)
(52.247-64)	PREFERENCE FOR PRIVATELY OWNED US FLAG COMMERCIAL VESSELS (JUN 2000)
(52.247-67)	SUBMISSION OF COMMERCIAL TRANPORTATION BILLS TO THE GENERAL SERVICES ADMINISTRATION FOR AUDIT (JUN 1997)
(52.249-6)	TERMINATION (COST-REIMBURSEMENT) (SEP 1996)
(52.249-14)	EXCUSABLE DELAYS (APR 1984)
(52.251-1)	GOVERNMENT SUPPLY SOURCES (APR 1984)
(52.251-2)	INTERAGENCY FLEET MANAGEMENT SYSTEM VEHICLES AND RELATED SERVICES (JAN 1991)
(52.253-1)	COMPUTER GENERATED FORMS (JAN 1991)

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) CLAUSES:

(1852.208-81)	RESTRICTIONS ON PRINTING AND DUPLICATING (AUG 1993)
(1852.209-72)	COMPOSITION OF THE CONTRACTOR (DEC 1988)
(1852.215-84)	OMBUDSMAN (JUN 2000) The installation Ombudsman is James L. Jennings, John F. Kennedy Space Center, NASA, Mail Code AA-A, Kennedy Space Center, Florida, 32899, phone (321) 867-2355.
(1852.219-74)	USE OR RURAL AREA SMALL BUSINESS (SEP 1990)
(1852.219-76)	NASA 8 PERCENT GOAL (JUL 1997)
(1852.219-77)	NASA MENTOR-PROTEGE PROGRAM (MAY 1999)
(1852.227-14)	RIGHTS IN DATA – GENERAL
(1852.203-70)	DISPLAY OF INSPECTOR GENERAL HOTLINE POSTERS (JUN 2001)

(End of By Reference Section)

ARTICLE I-2 FAR 52.204-1 APPROVAL OF CONTRACT (DEC 1989)

This contract is subject to the written approval of the Procurement Officer and shall not be binding until so approved.

(End of clause)

CONTRACT CLAUSES

ARTICLE I-3 FAR (52.222-42) STATEMENT OF EQUIVALENT RATES FOR FEDERAL HIRES (MAY 1989)

In compliance with the Service Contract Act of 1965, as amended, and the regulations of the Secretary of Labor (29 CFR Part 4), this clause identifies the classes of service employees expected to be employed under the contract and states the wages and fringe benefits payable to each if they were employed by the contracting agency subject to the provisions of 5 U.S.C. 5341 or 5332.

This Statement is for Information Only:

It is not a Wage Determination (Classes of Employees are based on the 2001 SF 98 submittal to the Department of Labor for Contract NAS10-12180, and rates are based on Wage Determination 1994-2118, Revision 16 dated 05/17/01)

CLASSES OF EMPLOYEES (Service Contract Act Title)	**HOURLY WAGE RATE THAT WOULD BE PAID IF FEDERALLY EMPLOYED**
Computer Operator	13.03
Materials Coordinator	16.43
Engineering Tech III	14.47
Engineering Tech IV	17.22
Engineering Tech V	18.84
Engineering Tech VI	20.82
Shipping / Receiving Clerk	11.03
Shipping Packer	10.57
Supply Technician	16.80
Secretary I	12.43
Secretary II	13.67
Secretary III	14.77
Secretary IV	16.80
Agricultural Technician	10.86
Animal Caretaker	9.00
Lifeguard	8.61
Order Clerk I	9.03
Order Clerk II	12.36
Material Handling Laborer	6.91
Computer Data Librarian	11.16
Technical Writer	19.62

Fringe Benefit Information:

Health and Welfare: Life, accident, and health insurance plans, sick leave, pension plans, civic and personal leave, severance pay, and savings and thrift plans. Minimum employer contributions costing an average of $2.56 per hour computed on the basis of all hours worked by service employees employed on the contract.

Vacation: 2 weeks paid vacation after 1 year of service with a contractor or successor, 3 weeks after 5 years, 4 weeks after 15 years, and 5 weeks after 20 years. Length of service includes the whole span of continuous service with the present contractor or successor, wherever employed, and with predecessor contractors in the performance of similar work at the same Federal facility.

Holidays: Minimum of 10 paid holidays per year: New Year's Day, Martin Luther King Jr.'s Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving Day, and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.)

ARTICLE I-4 **FAR 52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS (MAY 2001)**

(a) Definitions. As used in this clause-

"Commercial item" has the meaning contained in the clause at 52.202-1, Definitions.

"Subcontract" includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

(b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.

(c)(1) The following clauses shall be flowed down to subcontracts for commercial items:

(i) 52.219-8, Utilization of Small Business Concerns (Oct 2000) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds $500,000 ($1,000,000 for construction of any public facility), the subcontractor must include 52.2198 in lower tier subcontracts that offer subcontracting opportunities.

(ii) 52.222-26, Equal Opportunity (FEB 1999) (E.O. 11246).

(iii) 52.222-35, Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (Apr 1998) (38 U.S.C. 4212(a)).

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (June 1998) (29 U.S.C. 793).

(v) 52.247-64, Preference for Privately Owned U.S.-Flagged Commercial Vessels (June 2000) (46 U.S.C. Appx 1241) (flowdown not required for subcontracts awarded beginning May 1, 1996).

(2) While not required, the Contractor may flow down to subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

(End of clause)

(End of clause)

ARTICLE I-5 FAR 52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

Federal Acquisition Regulation (FAR) clauses:

http://www.arnet.gov/far/

NASA FAR Supplement (NFS) clauses:

http://www.hq.nasa.gov/office/procurement/regs/nfstoc.htm

(End of clause)

ARTICLE I-6 NFS 1852.204-75 SECURITY CLASSIFICATION REQUIREMENTS (SEP 1989)

Performance under this contract will involve access to and/or generation of classified information; work in a security area, or both, up to the level of Secret. See Federal Acquisition Regulation clause 52.204-2 in this contract and DD Form 254, Contract Security Classification Specification, Attachment II.

(End of Clause)

CONTRACT CLAUSES

ARTICLE I-7 NFS 1852.204-76 SECURITY REQUIREMENTS FOR UNCLASSIFIED INFORMATION TECHNOLOGY RESOURCES (JULY 2001)

(a) The Contractor shall be responsible for Information Technology security for all systems connected to a NASA network or operated by the Contractor for NASA, regardless of location. This clause is applicable to all or any part of the contract that includes information technology resources or services in which the Contractor must have physical or electronic access to NASA's sensitive information contained in unclassified systems that directly support the mission of the Agency. This includes information technology, hardware, software, and the management, operation, maintenance, programming, and system administration of computer systems, networks, and telecommunications systems. Examples of tasks that require security provisions include:

(1) Computer control of spacecraft, satellites, or aircraft or their payloads;

(2) Acquisition, transmission or analysis of data owned by NASA with significant replacement cost should the contractor's copy be corrupted; and

(3) Access to NASA networks or computers at a level beyond that granted the general public, e.g. bypassing a firewall.

(b) The Contractor shall provide, implement, and maintain an IT Security Plan. This plan shall describe the processes and procedures that will be followed to ensure appropriate security of IT resources that are developed, processed, or used under this contract. The plan shall describe those parts of the contract to which this clause applies. The Contractor's IT Security Plan shall be compliant with Federal laws that include, but are not limited to, the Computer Security Act of 1987 (40 U.S.C. 1441 et seq.) and the Government Information Security Reform Act of 2000. The plan shall meet IT security requirements in accordance with Federal and NASA policies and procedures that include, but are not limited to:

(1) OMB Circular A-130, Management of Federal Information Resources, Appendix III, Security of Federal Automated Information Resources;

(2) NASA Procedures and Guidelines (NPG) 2810.1, Security of Information Technology; and

(3) Chapter 3 of NPG 1620.1, NASA Security Procedures and Guidelines.

(c) Within 30 days after contract award, the contractor shall submit for NASA approval an IT Security Plan. This plan must be consistent with and further detail the approach contained in the offeror's proposal or sealed bid that resulted in the award of this contract and in compliance with the requirements stated in this clause. The plan, as approved by the Contracting Officer, shall be incorporated into the contract as a compliance document.

(d)(1) Contractor personnel requiring privileged access or limited privileged access to systems operated by the Contractor for NASA or interconnected to a NASA network shall be screened at an appropriate level in accordance with NPG 2810.1, Section 4.5; NPG 1620.1, Chapter 3; and paragraph (d)(2) of this clause. Those Contractor personnel with non-privileged access do not require personnel screening. NASA shall provide screening using standard personnel screening National Agency Check (NAC) forms listed in paragraph (d)(3) of this clause, unless contractor screening in accordance with paragraph (d)(4) is approved. The Contractor shall submit the required forms to the NASA Center Chief of Security (CCS) within fourteen (14) days after contract award or assignment of an individual to a position requiring screening. The forms may be obtained from the CCS. At the option of the government, interim access may be granted pending completion of the NAC.

(2) Guidance for selecting the appropriate level of screening is based on the risk of adverse impact to NASA missions. NASA defines three levels of risk for which screening is required (IT-1 has the highest level of risk):

(i) IT-1 -- Individuals having privileged access or limited privileged access to systems whose misuse can cause very serious adverse impact to NASA missions. These systems include, for example, those that can transmit commands directly modifying the behavior of spacecraft, satellites or aircraft.

(ii) IT-2 -- Individuals having privileged access or limited privileged access to systems whose misuse can cause serious adverse impact to NASA missions. These systems include, for example, those that can transmit commands directly modifying the behavior of payloads on spacecraft, satellites or aircraft; and those that contain the primary copy of "level 1" data whose cost to replace exceeds one million dollars.

(iii) IT-3 -- Individuals having privileged access or limited privileged access to systems whose misuse can cause significant adverse impact to NASA missions. These systems include, for example, those that interconnect with a NASA network in a way that exceeds access by the general public, such as bypassing firewalls; and systems operated by the contractor for NASA whose function or data has substantial cost to replace, even if these systems are not interconnected with a NASA network.

(3) Screening for individuals shall employ forms appropriate for the level of risk as follows:

(i) IT-1: Fingerprint Card (FC) 258 and Standard Form (SF) 85P, Questionnaire for Public Trust Positions (Information regarding financial record, question 22, and the Authorization for Release of Medical Information are not applicable);

(ii) IT-2: FC 258 and SF 85, Questionnaire for Non-Sensitive Positions; and

(iii) IT-3: NASA Form 531, Name Check, and FC 258.

(4) The Contracting Officer may allow the Contractor to conduct its own screening of individuals requiring privileged access or limited privileged access provided the Contractor can demonstrate that the procedures used by the Contractor are equivalent to NASA's personnel screening procedures. As used here, equivalent includes a check for criminal history, as would be conducted by NASA, and completion of a questionnaire covering the same information as would be required by NASA.

(5) Screening of contractor personnel may be waived by the Contracting Officer for those individuals who have proof of --

(i) Current or recent national security clearances (within last three years);

(ii) Screening conducted by NASA within last three years; or

(iii) Screening conducted by the Contractor, within last three years, that is equivalent to the NASA personnel screening procedures as approved by the Contracting Officer under paragraph (d)(4) of this clause.

(e) The Contractor shall ensure that its employees, in performance of the contract, receive annual IT security training in NASA IT Security policies, procedures, computer ethics, and best practices in accordance with NPG 2810.1, Section 4.3 requirements. The contractor may use web-based training available from NASA to meet this requirement.

(f) The Contractor shall afford NASA, including the Office of Inspector General, access to the Contractor's and subcontractors' facilities, installations, operations, documentation, databases and personnel used in performance of the contract. Access shall be provided to the extent required to carry out a program of IT inspection, investigation and audit to safeguard against threats and hazards to the integrity, availability and confidentiality of NASA data or to the function of computer systems operated on behalf of NASA, and to preserve evidence of computer crime.

(g) The Contractor shall incorporate the substance of this clause in all subcontracts that meet the conditions in paragraph (a) of this clause.

(End of clause)

CONTRACT CLAUSES

ARTICLE I-8 **NFS 1852.242-78 EMERGENCY MEDICAL SERVICES AND EVACUATION (APR 2001)**

The contractor shall, at its own expense, be responsible for making all arrangements for emergency medical services and evacuation, if required, for its employees while performing work under this contract outside the United States or in remote locations of the United States. If necessary to deal with certain emergencies, the contractor may request the Government to provide medical or evacuation services. If the Government provides such services, the contractor shall reimburse the Government for the costs incurred.

(End of clause)

SECTION J OF RFP10-00-0051

LIST OF ATTACHMENTS

J.1 LIST OF ATTACHMENTS

The following attachments constitute part of this contract:

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	Appendix 2 – Licenses and Certifications
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II.	DD Form 254, CONTRACT SECURITY CLASSIFICATION SPECIFICATION
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(End of Clause)

ATTACHMENT I

STATEMENT OF WORK

LIFE SCIENCES SERVICES CONTRACT

FOR

JOHN F. KENNEDY SPACE CENTER

STATEMENT OF WORK
LIFE SCIENCES SERVICES CONTRACT
WORK BREAKDOWN STRUCTURE

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Introduction

This Statement of Work (SOW) describes the services to be provided by the Life Science Services Contractor (hereinafter referred to as "the Contractor"). The Contractor shall provide non-personal technical services to the Spaceport Engineering & Technology Directorate (YA), the International Space Station and Payload Processing Directorate (UB), the External Relations & Business Development Directorate (XA), the Space Shuttle Processing Directorate (PH), the Safety, Health & Independent Assessment Directorate (QA), and the Spaceport Services Directorate (TA) under the functional areas designated herein. The work shall be consistent with the John F. Kennedy Space Center (KSC) Life Sciences roles and responsibilities and may occur at other geographic locations.

The tasks described in this SOW require services that range from operating a variety of Government laboratories to providing scientific and engineering management of complex research and technology projects. The KSC operational mission and applied research permeate all work elements.

This is Cost-Plus-Award-Fee / Performance Fee (CPAF/PF) performance-based contract. During the budget process each year the Government and the Contractor will partner performance areas that specifically define the mission services and establish performance-based "outcomes". The Contractor shall establish and implement a Quality Surveillance Plan, which will become part of the contract, to self-monitor and report its performance.

The Government will evaluate the Contractor's performance against the entire program including these following top-level elements:

- Medical planning for shuttle launch and landing activities
- Health protection and emergency medical care for the astronauts and family members
- Ecological program implementing KSC's regulatory responsibilities and demonstrating environmental stewardship
- Biological science technical insight and development skills at the launch and landing site assuring science credibility
- Processing skills and facility/lab readiness and certifications for biological missions assuring critical-path readiness
- Health and safety initiatives protecting the general public and workforce
- Cost Control / Performance
- Schedule Performance

1.0 Project/Program Management

The Contractor shall institute and maintain an effective, efficient, and responsive program management organization that is responsible for management and oversight of Contractor personnel, other contract resources, and contract performance, deliverables, and cost. The Contractor shall promptly alert the Contracting Officer's Technical Representative (COTR) and the Contracting Officer (CO) of any problems that may adversely impact the timely and cost-effective delivery of quality products and services under this contract.

The Contractor shall comply with all NASA KSC ISO 9001- "2000 Quality Management System Requirements" processes. The contractor shall have in place a management system that could be certified as ISO 9001 compliant within 2 years of contract initiation.

1.1 Management Reviews

Management Meeting – The Contractor shall attend management meetings to discuss accomplishments, problems, corrective actions and other details of the Life Science Services Contract (LSSC) operations. The meetings will be scheduled on a weekly basis, or as otherwise scheduled, and shall be attended by cognizant Contractor and NASA personnel.

Contract Review Meeting – The Contractor shall conduct a contract review on a quarterly basis. The quarterly review shall cover all aspects of the LSSC operations, both technical and business, including a concise summary of performance and risk assessment in each major work element of the Mission Plan as addressed in its internal surveillance report. The report shall include data that supports the Contractor's accomplishment of the critical performance element metrics defined in the Performance Evaluation and Award Fee Plan. The Contractor management team, the Contracting Officer, Contracting Officer's Technical Representative, and other members of the NASA technical team, shall attend the review.

The Contractor shall submit Project Status Reports per DRD 002.

The Contractor shall submit Internal Surveillance Plan per DRD 027.

1.2 Business Management

1.2.1 Human Resources

The Contractor shall implement processes and procedures necessary to maintain a highly skilled workforce. The Contractor shall apprise the COTR and the CO of any human resources issues that could have an impact on KSC or LSSC operations.

The Contractor shall provide the following reports:

- DRD 022, Monthly KSC Headcount Report
- DRD 020, Equal Employment Opportunity Report

1.2.2 Property Control

The Contractor shall establish and implement procedures to ensure the proper control, use and maintenance of the "installation provided property" provided to support the LSSC

operations. The Contractor shall serve as the Property Custodian for all installation Accountable Property provided to the LSSC in accordance with government regulations. The contractor's custodial responsibilities are defined in the current version of KHB4000.1, Supply Support System Manual, Part 5, Section 1 – Controlled Equipment Accountability and Custodial Management. The Contractor shall provide controls for equipment, as defined in NPG 4200.1 E, "NASA Equipment Management Manual."

1.2.3 Motor Vehicle Utilization

The Contractor shall provide all motor vehicles necessary to perform the requirements of the contract and implement a plan (DRD 021) to effectively manage the motor vehicles needed.

1.2.4 Cost Control

The Contractor shall provide the following cost control documents:

- DRD 001, Financial Management Report
- DRD 025, Cost Phasing Plan

1.2.5 Licensures and Certifications

The Contractor shall assure designated Contractor personnel, activities, Contractor operated laboratories, and Government laboratories under the Contractor's purview, are properly licensed and/or certified as appropriate to their discipline, technical level, statutory requirement, or regulatory requirement (ref. Appendix 2) for the entire period of performance.

1.2.6 Export Control

The Contractor shall implement an Export Control Program to assure compliance to International Trade in Arms Regulation (ITAR) and Export Administration Regulations (EAR).

The Contractor shall identify an Export Control Official responsible for the implementation and conduct of the program and to coordinate issues with the government point of contact, KSC Center Export Administrator (CEA).

1.3 Safety, Health, Reliability, Maintainability & Quality Management

The Contractor shall develop, implement, and maintain a NASA compliant Safety, Reliability, Maintainability & Quality Assurance (SRM&QA) program, which covers all areas of performance described in this SOW.

1.3.1 Safety and Health

The Contractor shall implement and adhere to a comprehensive safety and health program in accordance with NPD 8710.2, NPD 8700.1 and the applicable safety and health policy documents (ref. Appendix 3, "List of Documents"). The Contractor shall comply with the Safety and Health Plan, Section J, Attachment 4 and other program documentation that shall be developed by the Contractor, approved by NASA, and implemented for the performance of work defined by this SOW. The Contractor shall conduct human factors analysis of mishaps and close calls to ensure identification and mitigation of root causes, with a goal of recurrence prevention (ref. MIL-STD-1472, Human Factors).

The Contractor's Safety and Health Plan (ref. DRD 010) shall apply to all aspects of the contract.

The Contractor shall comply with the reporting, investigating, and record keeping requirements of NPG 8621.1. The Contractor shall provide safety and mishap reports as identified in DRD 011 and DRD 012.

The contractor shall have a robust safety and health program that complies with the most recent OSHA Voluntary Protection Program (VPP) requirements for Star certification within 12 months after contract award. The contractor shall document its progress towards compliance with this requirement in the DRD 002, Contract Performance Assessment, quarterly submittals. Twelve months after award the contractor shall submit to the Government a report that documents compliance with OSHA Star certification requirements in the same format required for the OSHA Star certification application. Thereafter, the contractor shall document its continued compliance with VPP Star certification requirements in the DRD 002 quarterly submittals. If the contractor voluntarily obtains OSHA VPP Star certification, the contractor shall provide NASA with a copy of all reports submitted to OSHA for the purpose of maintaining Star certification

1.3.2 Reliability, Maintainability & Quality Management

The Contractor shall develop and implement a Reliability and Maintainability (RM) program that shall conform to NPD 8720.1 and NPD 8730.3. This program shall be defined in an RM Plan (DRD 013) that shall be developed, approved by NASA, and implemented for the RM tasks required in performance of this SOW.

The Contractor shall establish and implement a Quality Management System Plan, maintain it during the life of the contract, and supply at audit (ref. DRD 016).

The Contractor shall meet the requirements of all appropriate Agency documents (ref. Appendix 3, "List of Documents"), as well as those requirements described in:

- NPD 8730.3 "NASA Quality Management System Policy (ISO9000).
- NPD 8720.1 "NASA Reliability and Maintainability Program Policy
- NSTS 5300.4 (1D-2) Safety, Reliability, Maintainability, Quality Provisions for the Space Shuttle Program

1.3.3 Risk Management

The Contractor shall develop and implement a risk management plan (ref DRD 028) in accordance with the following documents and guidelines:

- NPG 7120.5, paragraph 4.2 –"Risk Management"
- NPG 8715.3– "NASA Safety Manual"

The risk management plan shall provide an organized systematic decision making process that efficiently identifies, analyzes, plans, tracks, controls, communicates, and documents risks associated with the implementation of the Life Science Services Contract at KSC.

The Contractor shall Identify and discuss risk factors and issues that are relevant with the performance of assigned activities during management meetings and contract reviews. This discussion shall include methods to manage identified risks.

1.4 Environmental Compliance

The contractor shall support its role in environmental compliance as defined in KMI 8800.8, "KSC Environmental Management."

KSC is responsible for protecting natural resources while conducting Center activities. Impacts to the environment must be minimized while satisfying operational requirements. Specific guidance and responsibilities for environmental management and documentation for this Center are defined in KHB 8800.6, "Environmental Management."

The Contractor shall develop the required documentation for its assigned projects and perform the services required in this SOW in compliance with the procedures and regulations defined in KHB 8800.6.

The Contractor shall maintain appropriate data files within the NASA Environmental Tracking System (NETS) or supply data as required for input to NETS.

The Contractor shall be responsible for compliance with the procedures for handling and managing hazardous wastes as defined in KHB 8800.7, "Waste Management Handbook", for visiting scientists, principal investigators, and on-site subcontractors associated with the Life Sciences program activities. The Contractor shall comply with the most current Executive Orders on Affirmative Procurement and Recycling, Hazardous Chemical Inventory and Use Reduction, and Energy Conservation.

1.5 Procurement Management

The Contractor shall purchase goods and services of a program-specific nature necessary to accomplish assigned work on the LSSC, in accordance with the guidance of the Federal Acquisition Regulations (FAR), and the NASA FAR Supplement (NFS). Program purchasing is defined as support to projects and other program activities associated with the LSSC. The Contractor shall maintain an up-to-date comprehensive inventory of equipment and supplies, supporting the deployment, utilization, and appropriate disposal of assets for both in-house and visiting scientists and engineers.

1.5.1 Purchasing Procedures

The Contractor shall develop and implement a comprehensive set of procedures covering all phases of the purchasing process and shall ensure integrity, efficiency and protection of the government's resources in all purchasing actions.

The Contractor shall utilize the Transportation Officer, J-BOSC Receiving Warehouse, Building M6-744, Kennedy Space Center, FL, 32899, as its receiving agent.

The Contractor shall implement procedures to ensure that its suppliers identify on their shipping documents all incoming items that require Government tagging.

1.5.2 Purchase Order Report

The Contractor shall provide the Contracting Officer with a monthly Purchase Order Report, in accordance with DRD 023. The Contracting Officer will conduct Contractor Purchasing System review periodically to evaluate the Contractor's performance in this area.

1.6 Documentation and References

The Contractor shall operate and maintain a life sciences research resource capability, providing electronic media and / or hard copy archives of all research results, manuscripts, abstracts, proposals, reports, and other documentation associated with life sciences studies and experiments conducted at or on behalf of KSC.

The Contractor shall document and archive operational and scientific activities.

The Contractor shall participate in the Life Sciences Data Archiving program and be responsible for including applicable information for KSC-managed flight experiments.

1.7 Public Affairs

The Contractor shall conduct laboratory tours and interviews approved by NASA Public Affairs. The Contractor shall participate in activities, such as interviews, still photos, video taped footage, and tour escort.

2.0 Facility and Laboratory Operations

The Contractor shall provide technical services for the operation of the LSSC facilities (ref. Appendix 7) and laboratories provided as Government-furnished base support. The Contractor shall operate, maintain, and control access to the following designated facilities and laboratories required to support Life Sciences programs at KSC and CCAFS:

- the Hanger L complex, including Hangar L, Little L, and The Outback,
- laboratories located in the Operations and Checkout (O&C) Building, including the Baseline Data Collection Facility and the Aquatics Laboratory, and,
- the Bioastronautics Operations and Support Unit (BOSU).

2.1 Facilities

The Contractor shall operate life sciences facilities to provide operational and technical assistance to all approved NASA Life Sciences programs or projects. The life sciences facilities are comprised of several buildings on Kennedy Space Center, Cape Canaveral Air Force Station, and Dryden Flight Research Center providing physical infrastructure to accommodate associated laboratories, shops, offices, and equipment / supplies inventories (ref. Appendix 4).

The Contractor shall assist NASA in oversight of life sciences facility operations and maintenance tasks by identifying and tracking facility requirements.

The Contractor is responsible for daily operations and inputs to long-range planning of the assigned life sciences facilities.

Certain facilities identified in Appendix 7 will only be available through September 30, 2003, after which they will be withdrawn. The Contractor shall move those affected operations and personnel out of the Hangar facilities into a Contractor-supplied facility with minimal operational impact. See "Note" below for information on the State of Florida's agreement to finance, construct, and make available a facility for contractor use under specified terms and conditions. The Contractor-supplied facilities shall meet the following:

- Supply all the capabilities of the withdrawn facilities and laboratories, including accredited animal care facilities
- Provides enough space at a single site to facilitate the current and future laboratory activities and office space
- Provide continuous facility and personnel security systems sufficient to protect facilities, equipment, experiment material, and personnel from outside threats
- Be in close proximity of the Florida Space Research Institute (FSRI), which will be located within the SERPL and the Space Commerce Park
- Be within the KSC secure area

(NOTE): NASA and the State of Florida have collaborated in a new and unique partnership to provide the Space Experiment Research and Processing Laboratory (SERPL) to house NASA laboratory equipment and provide additional space for work associated with the LSSC. See Appendix 8 for the complete agreement. The SERPL will be a world-class laboratory facility with capability to host ISS experiment processing and biological and life sciences research. Anticipated research activity includes biotechnology, microgravity, space agriculture, biomedicine, and other fields of biological and life sciences. The SERPL will be the magnet facility for a proposed adjacent 400-acre Space Commerce Park. This facility will be available for lease on an annual basis to the LSSC contractor at a not-to-exceed amount of $1.2 million (escalated 3% per year after 1999). Further, for periods in which the SERPL is predominantly occupied by a NASA contractor, the State of Florida shall be responsible for SERPL operation and maintenance (O&M) costs in the fixed amount of $400,000 per year (escalated 3% per year after 1999). NASA's occupying contractor will be responsible for performance of the O&M, and payment will commence upon substantial completion of SERPL construction and predominant occupancy by a NASA contractor and will be paid directly to the contractor to be applied to overall SERPL O&M costs. SERPL O&M includes, but is not limited to, grounds keeping and building exterior maintenance, stormwater treatment system maintenance, janitorial services, painting, and building systems, including, but not limited to mechanical, plumbing, electrical, HVAC, premise wiring, communications, security, and specialty systems. NASA will be responsible for utility costs for the portions of the facility occupied by NASA or its contractor. Contact Gregory A. Popp, Spaceport Florida Authority (SFA) at 321-730-5301, ext. 1110, for information regarding the leasing arrangement for the SERPL.

The contractor will support NASA's responsibilities under the SERPL agreement as required. Such support will include, but is not limited to, providing an annual facility utilization plan establishing projected requirements for NASA program use of the SERPL for the calendar year; designing, equipping, operating, and managing all SERPL laboratories and specialized research areas as required for NASA programs; and operating and

maintaining mission-related experiment and research equipment required for NASA programs.

2.1.1 Facility Utilization

The Contractor shall maintain a monthly laboratory utilization plan/schedule reflecting all laboratory assignments, as well as, a semi-annual long-range projection of facility utilization (ref. DRD 024). The contractor shall provide quarterly briefings to the COTR and the CO. The Contractor shall assign office and laboratory space to visiting and resident investigators per direction of NASA. This includes the planning and tracking of construction of facility projects that could impact laboratory activities and assuring readiness of these assets to support mission requirements, sponsored research, and other NASA approved projects.

The Contractor shall conduct long-range flight experiment laboratory requirement projections based on current launch manifests and outfitting schedules. The Contractor shall utilize these data to determine facility utilization assignment capabilities, as well as assuring budget requirements are properly identified.

The Contractor shall prepare and perform emergency facility operations in support of Joint Handbook (JHB) 2000 (ref. DRD 026).

2.1.2 Space Experiment Research and Processing Laboratory (SERPL) Activation

The Contractor shall assist the NASA project manager during the SERPL facility construction and activation phases. Activation tasks will include disassembly, modification, relocation, and validation of all laboratory equipment located at Hangar L, Little L, BOSU, and the O&C required for the execution of the LSSC work elements targeted for movement to SERPL. The Contracting Officer will identify the specific activation tasks that the LSSC Contractor will be responsible for performing as NASA's plans become more defined.

The contractor shall provide an activation plan within 60 days after the Contracting Officer provides direction. NASA will provide the contractor a six-month window to perform these tasks. The window is anticipated to start in April 2003; however, the NASA Contracting Officer will confirm a specific start date no later than May 2002.

2.2 Laboratories

The Contractor shall operate and maintain the laboratories identified in Appendix 7 to provide the following capabilities to meet NASA requirements:

- off-line payload processing,
- payload development, mission simulation, and flight ground-control,
- ecological and biological ground research,
- environmental monitoring,
- educational outreach, and,
- flight-crew medical operations.

The Contractor shall maintain applicable accreditations as described in Appendix 2 and shall maintain Internal Operating Procedures (IOPs) to assure consistent and safe laboratory operations (ref. DRD 016).

2.2.1 Clinical Laboratories

The Contractor shall operate a clinical analytical laboratory proficient in clinical chemistry, hematology, clinical microbiology, immunology, serology, and other clinically specialized areas.

The Contractor shall operate this laboratory in a manner consistent with certification by the State of Florida Department of Health and Rehabilitative Services and shall obtain and maintain certification by the College of American Pathologists (CAP).

The Contractor shall operate and maintain the laboratory with technologists and technicians registered by the American Society of Clinical Pathologists (ASCP), and certified at the appropriate technical level by the State of Florida (ref. Appendix 2).

The Contractor shall identify laboratory requirements to assist NASA medical staff and principal investigators during performance of all experiments requiring such support. Experiment activities include pre- and post-flight baseline data collection activities, synchronous ground control experiments, and acute care of human subjects.

2.2.1.1 Clinical Chemistry and Hematology Laboratory

The Contractor shall operate a clinical chemistry and hematology laboratory providing blood chemistry, hematology, urinalysis, immunology, and serology analysis.

2.2.1.2 Clinical and Environmental Microbiology

The Contractor shall operate a microbiological services laboratory providing human bacteriological and mycological assays in the areas of clinical, environmental, facilities (including the Center's potable water system), and spacecraft-specific microbiology for KSC and Cape Canaveral Air Force Station (CCAFS). The Contractor shall operate the Microbiology Laboratory as a resource supporting Medical Operations, as well as KSC's clinical occupational medicine requirements.

The Contractor shall ensure that this laboratory meets certification by the State of Florida Department of Rehabilitative Services and other Florida State certifications (ref. Appendix 2).

2.2.1.3 Physiological Stress Laboratory

The Contractor shall provide medical monitoring and scheduling for the physiological stress laboratory, and assist in the design and implementation of biomedical studies to enhance the understanding of human physiology. Medical data shall be recorded and retained for reference and access in accordance with Privacy Act.

2.2.1.4 Baseline Data Collection Facility/Post-flight Science Support Facility

The Contractor shall operate, maintain, and support the Baseline Data Collection Facility at KSC and Post-flight Science Support Facility at DFRC for visiting scientists. The Contractor shall provide operational and technical assistance to any approved NASA investigation that requires testing human subjects, pre-, during, or post-flight, at KSC and at the DFRC when required.

2.2.2 Analytical Laboratories

The Contractor shall maintain analytical chemistry and microbiological analysis capability to support all elements of the LSSC.

2.2.2.1 Inorganic Chemistry

The Contractor shall operate an inorganic chemistry laboratory. The Contractor shall analyze samples for selected major elements at limits specified by the applicable EPA protocols (ref. Appendix 2). The Contractor shall analyze samples including water, soils, and plant and animal tissues.

2.2.2.2 Organic Chemistry

The Contractor shall operate an organic chemistry laboratory. The Contractor shall perform assays for both volatile and water-soluble trace organics and selected organic compounds in support of monitoring and research activities.

2.2.2.3 Microbiology Research Lab

The Contractor shall operate diagnostic microbiological instrumentation and be capable of interpreting ecological microbial data (bacterial and fungal) collected from field plots, plant growth chambers, and bioreactors. In the case of pathological organisms, the Contractor shall develop and test control strategies.

The Contractor shall monitor and report, in accordance with approved protocols, the microbiological status of the Life Sciences facilities (for elements such as animals, plants, nutrient solutions and water samples) and of the BDCF on a continuing basis. Sampling will be research specific, but will include nasal pharyngeal swabs and fecal specimens on animals received and maintained in the KSC Life Sciences facilities. Evaluation of microbiological sampling is accomplished per protocol and may be effected by an approved, off-site vendor. Microbiological assessment during activation, test/checkout, and operation of the aforementioned facilities is included.

2.2.2.4 Microscopy

The Contractor shall provide a capability to examine biological tissue and determine anatomical and morphological characteristics of the same. This capability requires observations at both the light and electron microscopy level.

2.2.3 Specialized Laboratories

2.2.3.1 Animal Care Facility

The Contractor shall operate and maintain a specific pathogen-free (SPF) animal holding facility. The Contractor shall operate the facility and assure its continuous accreditation by the American Association for the Accreditation of Laboratory Animal Care International (ref. Appendix 2 and DRD 018).

The Contractor shall care for animals as required pre-, during, and post-flight, including provision for veterinarian services for all vertebrate animals. The Contractor shall conduct receipt and quarantine of animals, routine animal husbandry, research, and facility readiness.

The Contractor shall operate and maintain an aquatics laboratory for ground-based testing and flight experiments.

The contractor shall ensure all annual reports and all reporting requirements concerning animal care, use, and husbandry are provided in a timely manner as outlined in the DRD.

The contractor shall maintain records and inventories on controlled substances used in the conduct of animal research activities in accordance with all applicable State and Federal guidelines, including the requirements as set forth by the United States Drug Enforcement Administration. These records shall include proper receipt, records of storage and inventory and proper disposal

2.2.3.2 Phytotron

The Contractor shall maintain a state-of-the-art plant science laboratory and establish interactions and collaborations with plant scientists. These facilities include plant growth chambers, resource recovery area, cold room, nutrient preparation area, tissue culture area, and harvesting area.

2.2.3.3 Experiments Monitoring Area

The Contractor shall configure and operate the Experiments Monitoring Area for data collection during missions per validated communications requirements (e.g., voice, video, and data). The Contractor shall conduct ground control activities in controlled chambers during flight and flight simulations.

2.2.3.4 Bio-specimen Transportation Van

The Contractor shall comply with maintenance procedures and operate a Bio-specimen Transportation Van for transportation of certain biological experiments to and from the launch/landing site.

2.2.3.5 Molecular Biology Laboratory

The Contractor shall operate and maintain a molecular biology laboratory. The Contractor shall support in-house and visiting investigator molecular biology research activities.

2.2.4 Experiment Support Laboratories

The Contractor shall provide laboratories to flight and ground research principal investigators and ensure that appropriate laboratory capabilities are available.

The Contractor shall assign experiment support laboratories to all users at the direction of NASA. The Contractor shall assure that the laboratories are equipped for biological or human research, including bio-specimen maintenance, sterile operations (tissue culturing and autoclaving), microbiology, light microscopy, analytical chemistry (spectrophotometry and chromatography), and radioactive isotope tracing.

2.2.5 Environmental Laboratories

The Contractor shall operate and maintain laboratories for receipt, preparation, and storage of field samples. The Contractor shall handle all samples with positive identification and labeling and shall store them under appropriate conditions.

The Contractor shall prepare soil samples by sieving, sizing, and treating for preservation.

The Contractor shall prepare biological samples by sorting, counting, dissecting, and treating for preservation.

The Contractor shall treat water samples for preservation and shipment to analytical chemistry laboratories.

2.3 Equipment Calibration and Maintenance

The Contractor shall assure calibration and maintenance support for all laboratory instrumentation, and shall maintain calibration and repair records for each instrument.

The Contractor shall coordinate with the KSC Calibration Laboratory on instruments and equipment that require calibration capabilities beyond the test equipment available to the Contractor technical personnel.

The Contractor shall assure that written requests to the KSC Calibration Laboratory for calibration of any such items are timely and properly submitted, and that appropriate records are maintained (ref. KHB 5330.9, "Metrology and Calibration").

2.4 Computer Resources

The Contractor shall maintain expertise in computer hardware, software, computer data management, networking, and IT Security. The Contractor shall utilize computer hardware, software, and networks in a cost effective manner to support activities of the LSSC. The Contractor shall comply with provisions of Section 508 of the Rehabilitation Act for all electronic and information technology it develops, maintains, procures, or uses.

The Contractor's desktop computer needs will be provided as base support through the NASA ODIN contract.

The Contractor shall support the needs of visiting investigators by providing desktop systems, printers, scanners, Internet connections, and related ADP equipment interfaces.

2.4.1 Hardware

The Contractor shall recommend upgrades to current non-desktop computer hardware when existing hardware is no longer cost effective to use and/or maintain. The Contractor shall assist in accessing the impact of proposed changes to computer platforms.

The Contractor shall report computer problems to the appropriate source for maintenance and track the corrective maintenance action to completion.

2.4.2 Software

The Contractor shall maintain appropriate documentation of software it develops. Software shall be documented in accordance with NPD 2820.1 "NASA Software Management, Assurance, and Engineering Policy," and controlled by the copyright laws listed in the contract.

2.4.3 Computer Data Management

The Contractor shall operate the Geographic Information System (GIS) database under the direction of NASA. The GIS computer system contains critical data generated to support the LSSC Biological Sciences and Medical Operations.

The Contractor shall backup GIS data on a weekly basis to reduce the risk of loss of electronic data.

The Contractor shall maintain, and update as necessary, all LSSC web pages.

2.4.4 Networking

The Contractor shall utilize the existing KSC computer networks.

The Contractor shall provide a method for international visitors to access the Internet exclusive of the KSC computer network.

2.4.5 IT Security

The Contractor shall prepare and deliver Information Technology Security Plans per DRD 019.

2.5 Support Operations

2.5.1 Visiting Scientist

The Contractor shall provide travel, per diem, and honoraria, as appropriate, to visiting scientists, including National Research Council (NRC) associates and professors assigned to KSC.

2.5.2 Investigator Support

The Contractor shall provide host services to on-site researchers (including KSC NASA, LSSC, National Research Council associates, and visiting professors), and off-line support for payload developers and/or principal investigators at KSC. This includes:

- gathering and documenting support requirements,
- developing and coordinating unique protocols in support of life sciences research activities,
- assuring readiness of laboratories, equipment, and specialized logistics, and
- coordinating related activities conducted in KSC Life Sciences facilities.

When KSC Life Sciences support activities are required at other locations (e.g., Dryden Flight Research Center (DFRC), secondary and contingency landing sites), the Contractor shall provide for equipment, support personnel, and mission-related travel.

The Contractor shall obtain and document the specific ground processing requirements for any ground investigation or flight mission manifested experiment or DSO/DTO, for validation by NASA. These include all the details necessary to fully define the requirements, such as:

- facilities and laboratories,
- equipment,
- supplies,
- chemicals,
- special services such as communication (e.g., voice, video, and data), and
- shipping information.

3.0 Educational Outreach

3.1 Medical Students/Residents

The Contractor shall plan and implement programs for visiting medical students, aerospace medicine residents, occupational medicine residents, and other students/trainees participating in KSC medical training programs.

3.2 Fundamental Biology Research Program Education Outreach Support

3.2.1 Programmatic Support

The Contractor shall provide support to the Fundamental Biology Outreach Program (FBOP), managed at KSC. The Contractor shall communicate and coordinate with all organizations that implement FBOP activities.

The Contractor shall develop and/or ensure FBOP products contain accurate science information and are useful as informational tools.

The Contractor shall manage the dissemination of the FBOP material inventory to internal and external customers.

The Contractor shall identify collaborative opportunities between non-FBOP Educational Outreach activities (i.e., sections 3.1 Medical Students / Residents and 3.3 Life Sciences Education Outreach) and FBOP activities, as well as, with non-LSSC FBOP implementers.

The Contractor shall assist in evaluating the effectiveness of implemented activities for accomplishing FBOP objectives.

3.2.2 Program Implementation

The Contractor shall implement specific outreach initiatives assigned to KSC. These initiatives include, as a minimum, the Life Sciences Educators Network and the Spaceflight and Life Sciences Training Program.

3.2.2.1 Life Sciences Educator Network

The Contractor shall implement the Life Sciences Educator Network. The contractor shall disseminate Life Sciences ground and flight research information and related outreach material to Network participants. The contractor shall solicit feedback for future material development enhancements. The contractor shall address daily inquiries, as well as conduct an annual symposium to focus on special interest lectures and strategic planning for future educator-oriented Life Sciences materials.

3.2.2.2 Space-flight and Life Sciences Training Program

The Contractor shall design, develop, and implement the Space Life Sciences Training Program (SLSTP) at KSC. This program shall consist of an annual six-week summer program with hands on learning experience for college undergraduate students majoring in life sciences, engineering, and other related courses of study. The program curriculum shall include lectures, laboratory projects and related demonstrations, simulations and tours, and an overview of and an exposure to all phases of NASA's Life Sciences research and flight activities and associated programs.

The Contractor shall develop scientific activities that utilize and complement KSC Life Sciences projects with minimal impact to ongoing activities. The Contractor shall coordinate SLSTP activities with the academic partners. The Contractor shall evaluate SLSTP activities for presentation to NASA Headquarters.

3.3 Life Sciences Education Outreach

The Contractor shall provide discipline support to the various educational programs sponsored by the Center.

4.0 Biological Sciences

The Contractor shall provide services to KSC Biological Sciences Programs. The major components of the programs are Environmental Programs and Space Biological and Ecological Sciences.

4.1 Environmental Programs

The Environmental Programs' primary goal is to evaluate, and ultimately to predict, the responses of living organisms to specified environmental conditions in both natural and controlled ecosystems. The various elements of the programs shall be integrated into a coordinated effort, especially in synergistic sharing of certain disciplines expertise, including analytical chemistry, systems ecology, plant physiology, microbiology, marine biology, data management, and logistic support. The Contractor shall conduct investigations in a scientifically sound manner, participate in program reviews, and actively publish in peer-reviewed journals. The Contractor shall report on the conditions of the KSC natural environment (ref. DRD 005) by providing ongoing reports and summaries on the KSC environment including statistical and trend analysis for water, air, threatened and endangered species and all other ecological parameters.

4.1.1 Environmental Monitoring Program

The Contractor shall implement DRD 006 in accordance with the KSC Ecological Monitoring Program as outlined in the Ecological Program Plan (KBR-PL-0001) and ensure monitoring support to Centerwide mitigation efforts.

The Contractor shall conduct field-monitoring activities, analyze and report the results of findings, and maintain appropriate databases. These monitoring activities adequately characterize environmental conditions and address environmental problems that may adversely affect local flora and fauna. These monitoring activities shall not duplicate, unless so directed, or interfere with environmental sanitation/pollution control support furnished by the J-BOSC under its WBS 3.5.2.2.

The Contractor shall collect, preserve, identify, catalog, and store specimens and samples to provide an archive for future reference. When preservation is not possible, the Contractor shall maintain documentation by photographic records or electronic images.

All sampling and analysis activities shall be performed according to Environmental Protection Agency (EPA) and State of Florida approved methods unless otherwise specified and agreed to by NASA.

The Contractor shall coordinate ecological monitoring activities with the U.S. Fish and Wildlife Service, National Park Service, other federal agencies, state and local governments, and Universities conducting research and monitoring on or adjacent to KSC.

4.1.1.1 Launch

The Contractor shall provide pre-launch environmental impact predictions and post-launch environmental field monitoring (ref. DRD 009).

The Contractor shall operate the Environmental Evaluation Console (EEC) in support of OMI S0007, "Shuttle Countdown (LPS)". The Contractor shall operate *Rocket Exhaust Effluent Diffusion Model* computer models, recognize and recommend corrective measures for problems in the models, and provide real-time predictions to the launch team.

The Contractor shall perform *in-situ* examination and sampling of vegetation, soils, and surface waters to determine the extent of impact to flora and fauna, both acute and chronic, resulting from Space Shuttle launches at KSC.

The Contractor shall enter the results of monitoring activities into an environmental database for the ecological assessment of long-term trends and chronic impacts, including bioaccumulation and report the ecological assessment (ref. DRD 017).

Surveillance of environmental impacts associated with launches from other locations may be required.

4.1.1.2 Pollution Events

The Contractor shall provide personnel to assess ecological impacts from pollution episodes when directed by the CO. These assessments shall include:

- determining biological impacts,
- measuring concentrations of pollutants in water, air, soil, or organisms, and,
- determining pollutant toxicity.

The Contractor shall document the findings of assessments and recommend clean-up procedures as appropriate.

4.1.1.3 Ambient Monitoring

The Contractor shall operate and maintain the KSC Permanent Air Monitoring Station (PAMS) and the National Atmospheric Deposition Program site at KSC and collect and store atmospheric and rain accumulation data to ascertain on a continuous 24-hour basis concentrations of pollutants and associated meteorological parameters according to EPA criteria (ref. DRD's 004 and 005). These systems shall be operated in accordance with accepted Federal and State of Florida Air Quality methods and standards and the National Atmospheric Deposition Program.

The Contractor shall report air quality standard exceedances to the NASA COTR (ref. Appendix 3).

The Contractor shall monitor surface and ground water in conjunction with other sampling activities, water pollution impact assessments, regulatory protection initiatives, and resource conservation criteria. Monitoring results shall be designed to characterize environmental conditions, identify changes in environmental quality, and relate monitoring results to prescribed regulatory standards (DRD 005).

4.1.1.4 Environmental Decision Support Service

The Contractor shall operate an Environmental Decision Support Service capable of providing operational elements with environmental management and impact assessment information consisting of, at a minimum:

- microcomputer-based geographic information system (GIS),
- environmental models, and
- multimedia data storage.

The system shall provide on-line information about the environmental conditions on the Center and provide timely information for resource management decisions.

The Environmental Decision Support lab shall produce, at a minimum, vegetation, soil, facility, and water imagery overlays, and have associated digitizing and stereographic equipment.

The Contractor shall enter environmental data (e.g., threatened/endangered species habitat, monitoring/study sites, permitted facility locations/specifications, waste and material storage locations) into the GIS, incorporate satellite imagery, and update all data layers and associated databases.

The Contractor shall maintain and enhance the Environmental Decision Support database program. The Contractor shall efficiently extract, display, and report information stored in the database system (ref. DRD 017). The Contractor shall provide and maintain a user-friendly interface for the database system.

The Contractor shall develop cost-effective methods of sharing computer peripherals and decision support database information.

4.1.1.5 Trend Analysis

The Contractor shall conduct trend analysis to support the development of models for predicting consequences of environmental perturbations. The Contractor shall summarize, interpret, and integrate the various ecological monitoring data sets with the primary objective of determining trends in these data.

The Contractor shall summarize ecological trends in technical reports (ref. DRD005).

4.1.1.6 Mitigation Strategies

The Contractor shall support the development and implementation of environmental mitigation strategies. This effort will include assessing the environmental problem, recommending corrective actions, and monitoring the results of implementing the adopted strategies.

The Contractor shall participate in studies of past hazardous material release sites at the Center with other KSC organizations at the direction of the COTR. This participation shall include, at a minimum:

- providing technical input to sampling plan development,
- evaluating sample analyses for regulatory significance,
- preparing two- and three-dimensional displays of the environmental contamination, and,
- preparing technical reports.

4.1.1.7 Environmental Management

The Contractor shall support the Center's environmental management programs in the areas of affirmative procurement, recycling, air permitting, remediation, and other initiatives as directed by the CO.

4.1.2 Environmental/Ecological Studies Program

4.1.2.1 Biological Assessments

The Contractor shall evaluate potential impacts to the environment from Center construction and operations. These biological evaluations require literature review, data review and interpretation, field surveys and sampling, and written final reports.

Biological Assessments shall be conducted and reported in such a manner as to satisfy regulatory requirements associated with threatened and endangered species.

The Contractor shall prepare ecological risk assessments in accordance with EPA and State of Florida protocols in support of Center investigations as directed by the CO.

4.1.2.2 Biological Investigations

The Contractor shall conduct surveys of flora and fauna at selected sites to identify and evaluate Center ecosystems. Surveys shall include surveillance of flora and fauna that could potentially be impacted by KSC operations.

The Contractor shall conduct research in habitat characteristics including, at a minimum, soils, water level, climate, and biogeochemical cycles in order to describe/evaluate Center ecosystems. Effects of natural or induced environmental perturbations such as fire, fluctuations in water level, and variations in salinities shall be investigated and reported.

Surveys shall determine impacts from KSC operations, project the cumulative effects of more subtle impacts, and develop predictive models. These impact determinations shall include accounting for relative habitat importance and Center biodiversity concerns.

The Contractor shall conduct a remote sensing, mapping, and analysis program to identify/characterize ecosystems and assess seasonal and long-term changes to major ecosystems. The Contractor shall participate in remote sensing/mapping cooperative studies between the Center and other NASA centers and/or government agencies.

The Contractor shall establish permanent sample plots that will correlate environmental information, water quality, and vegetation status over a sufficient time period to allow meaningful interpretations of environmental trends.

The Contractor shall conduct wildlife studies that concentrate on collecting population data and correlating these data with habitat information. Emphasis shall be placed on threatened and endangered species as well as species of special concern (i.e., state listed species, migratory species, species of regional importance). This environmental monitoring shall include aquatic studies, especially as they relate to sea grasses and manatees, and areas identified as National Estuary Protection sites. Some of the population studies will use radiotelemetry equipment and underground television systems furnished by the Government.

The Contractor shall ensure that all vertebrate studies are conducted in accordance with NPD 8910 and in coordination with the KSC Institutional Animal Care Use Committee (ref. Appendix 3).

4.2 Space Biological and Ecological Sciences

The Contractor shall conduct laboratory, payload development, and technology development activities that include research in fundamental biology, crop production, resource recovery, and biomass processing for long duration space habitation. Activities include, at a minimum, microgravity biological studies, crop production studies and the integration and evaluation of other components of an Advanced Life Support system. Laboratory research efforts concentrate on validating hardware or solving problems that arise during tests conducted at KSC. The Contractor shall conduct investigations in a scientifically sound manner, participate in program reviews, and actively publish in peer-reviewed journals.

4.2.1 Payload Development

The Contractor shall develop and implement Space Shuttle and Space Station flight experiments focusing mainly on plant growth and aquatic microgravity research. The Contractor shall provide Payload Development team engineering, integration, and science expertise through all phases of project development (concept definition through post-flight data analysis and archiving). The Contractor shall advise the NASA Project Manager on issues relevant to the goal of conducting safe and successful payload/experiments. The contractor shall prepare a monthly report depicting the overall progression of Spaceflight experiments (ref. DRD 003).

The Contractor shall implement risk management processes for all phases and aspects of projects including hardware design, operations, science objectives, etc.

The Contractor shall provide detailed and accurate cost, scheduling, and project management information. The contractor shall maintain project-level cost plans that are consistent with Program Operating Plan (POP) and contract budget exercises.

4.2.1.1 Flight Experiment Management

The Contractor shall provide technical integration expertise to define requirements and develop overall project objectives and goals for flight experiments assigned to KSC. The Contractor shall provide biological science expertise and advocate Principal Investigator project requirements as part of the payload development team.

The Contractor shall plan and coordinate all operations required to conduct a successful flight experiment including, but not limited to, Science Verification Testing, Payload Verification Testing, and flight experiment integration/de-integration activities. The Contractor shall conduct test readiness reviews, publish test objectives, and identify processing support requirements prior to the operations.

The Contractor shall conduct experiment research and development activities at remote locations, as appropriate. This includes flight experiment reduced-gravity certification testing on the NASA KC-135 aircraft to evaluate flight hardware performance, experiment protocols, or to gain other valuable information.

The Contractor shall train ground and flight crew personnel in experiment operations, prepare flight operation timelines, develop payload safety documentation, and provide data for the preparation of Payload Integration Plans and annexes. The Contractor shall prepare Shuttle and Station documentation while meeting applicable program requirements.

The Contractor shall provide "quick-look", "30-day", and "one-year" post-flight reports incorporating Principal Investigator information, hardware performance, and experiment results.

The Contractor shall evaluate technical feasibility of proposed flight experiments in support of NASA Research Announcements and solicitations for flight proposals.

The Contractor shall incorporate applicable information for KSC-managed flight experiments into the Life Sciences Data Archive and participate in the evolution and improvements of the Agency-wide program.

4.2.1.2 Flight Hardware Management

The Contractor shall maintain an inventory of Life Sciences flight hardware located at Kennedy Space Center. For experiments that cannot be accommodated using existing hardware, the Contractor shall propose to design, develop, and fabricate new flight hardware (or modify existing hardware) necessary to meet , project, Principal Investigator, and NASA program requirements.

The Contractor shall design and develop prototype, proto-flight, and flight hardware necessary to meet project/experiment goals and objectives as defined by NASA. The Contractor shall develop flight hardware in accordance with NASA safety regulations (e.g., Systems Safety Analysis for the Flight Safety Board per NHB 1700.7A).

The Contractor shall prepare an End-Item-Specification to document required hardware design specifications and performance parameters. The Contractor shall conduct Preliminary and Critical Design Reviews of all flight and ground hardware.

The Contractor shall fabricate and test prototype hardware as required during the development phase. The Contractor shall certify and validate the hardware design and performance following final fabrication.

The Contractor shall conduct ground laboratory studies to evaluate flight hardware's ability to maintain biological activity during space flight. The Contractor shall develop and/or test new technologies or methods of delivering radiant energy and water/nutrients to plants grown in these flight plant growth systems. These studies shall include investigations of photosynthesis, cellular structure, synthesis and degradation, metabolism, source/sink relationships, enzyme functions, and genetic alterations.

The Contractor shall provide configuration control of assigned flight hardware and associated ground support equipment, specifically identifying components/systems associated with Flight or Ground Safety verification and hazard reports and certifications.

The Contractor shall conduct pre- and post-flight preparations for experiment hardware in association with the Principal Investigator and overall experiment requirements.

Following flight, the Contractor shall assess hardware performance, document any hardware/functional anomaly, and recommend/implement design enhancement(s).

The Contractor shall maintain the hardware in a condition to assure it will be available and operable for space-flight experiments.

4.2.2 Ground Research

The Contractor shall propose and conduct research focused on the functional utilization of plants and other biological organisms to support human space exploration and for gaining general knowledge in the control and monitoring of closed ecological environments/systems.

The Contractor shall collect, validate, and summarize data at the conclusion of each experiment. These data shall be reduced to a form that is appropriate for technical reports or scientific articles.

The Contractor shall interpret and distribute data. This data shall be archived in a Life Sciences database allowing access, search, and statistical functions.

4.2.2.1 Systems Integration and Evaluation

The Contractor shall conduct research to provide a database of plant growth chambers operational modes, plant growth and biomass processing requirements, and resource recycling optimization options:

- growth of single crops under various conditions of atmospheric closure,
- recycling of various constituents,
- multi-cropping methods,
- biomass conversion processing, and,
- introduction of nutrients generated from treatments of the inedible biomass.

The Contractor shall collect adequate data in order to describe the mass flows, energy use, chamber operations, chemical and microbiological contaminants, and physical parameters.

4.2.2.2 Biomass Production

The Contractor shall conduct research that will evaluate horticultural techniques and environmental responses for a wide range of crops and other photosynthetic organisms. This laboratory research shall concentrate on the effects of high carbon dioxide and variation in irradiance and spectral quality on crop productivity. Studies shall emphasize increasing photosynthetic efficiency of crops growing at low irradiance.

4.2.2.3 Resource Recovery

The Contractor shall develop and test bioreactors that will extract soluble minerals, carbon dioxide, and water from inedible biomass for recycling to crops. This research shall include investigations with biomass leachate, bioreactor effluent, and ash produced by incineration of inedible biomass to provide nutrients for plant growth.

The Contractor shall develop and test bioreactors that will convert inedible plant biomass into useful food products. During the development and testing of these various bioreactors, the Contractor shall investigate mass and energy fluxes through each of the components and determine the microbiological and chemical characteristics. Products from the bioreactors shall also be evaluated for their potential use as food for humans. The Contractor shall develop baseline data for these bioreactors to allow for their scale-up and integration with biomass production. These data shall include reliability and risk assessment.

The Contractor shall conduct studies base-lining mass balances and energy balance using alternative systems (e.g., aquaculture).

4.2.2.4 Biological Response to Closed Systems

The Contractor shall conduct research into biological response in closed environmental systems. These studies shall include investigations of photosynthesis, cellular structure, synthesis and degradation, metabolism, source/sink relationships, enzyme functions, and genetic alterations.

The Contractor shall evaluate biological activity between environmental conditions present in flight hardware and the response of plants to gravity in ground-control studies.

4.2.2.5 Molecular Biology

The contractor shall propose and conduct research in areas of Molecular Biology that support closed biological systems, advanced bio-regenerative life support systems, fundamental space biology, and bio-regenerative resource recovery research and investigations.

The contractor shall conduct fundamental research in the Molecular Biology of living systems exposed to the space environment.

4.2.3 Animal Spaceflight Programs

The Contractor shall assist in the development and operation of the KSC Animal Spaceflight Programs research in animal husbandry and animal care by ensuring all animal holding and processing areas are maintained in accordance with AAALAC requirements for facility accreditation (ref. Appendix 2). The Contractor shall provide laboratory research personnel and expertise in animal husbandry for design and development of innovative hardware for animal husbandry and care in the space environment.

4.2.4 Spaceport Technology Development

The Contractor shall operate and maintain plant growth chambers, bioreactors, support equipment, and control systems to support flight and ground biological research. This support includes, but is not limited to, calibrating and maintaining instruments and sensors, interfacing sensors with computers, and developing computer control software.

The Contractor shall develop and test new technologies to improve system performance of ground and flight systems. Technology development efforts shall concentrate primarily on development of:

- environmental sensors,
- plant stress monitors,
- expert computer control systems, and,
- biomass processing equipment.

Emphasis shall be placed on operational reliability, miniaturization, on-line monitoring, automation, minimum calibration, and energy conservation.

The Contractor shall develop control software for plant growth systems. The Contractor shall enhance the automated control of the plant growth systems and bioreactors through the use of advanced control techniques.

The Contractor shall conduct failure mode and risk analysis and define options for recovery from a variety of failure scenarios.

5.0 Medical Operations

The Contractor shall provide medical services (including laboratory support) for:

- pre-launch preparations,
- launch, pre-landing, landing, and recovery,
- pre- and post-flight data collection; and
- field activities for biomedical operations support.

(Note: These services shall not duplicate, unless so directed, or interfere with dedicated emergency medical support furnished by the J-BOSC under its WBS).

5.1 Spaceflight Medical Support

The Contractor shall contribute to an operational medical support program for Space Shuttle and Space Station operations by providing professional and technical services for pre- and post-flight medical care of astronauts and other Space Shuttle and Space Station crew persons as well as certain other individuals associated with Space Shuttle and Space Station flight activities. This task is for support of space flight operations at KSC, as defined in the Medical Operations Requirements Document (MORD) for the Space Shuttle, JSC-13956 and the KSC Medical Operations Support Implementation Plan (MOSIP), KBM-PL1.1.

5.1.1. Launch/Landing Emergency Medical Services Planning

The Contractor shall prepare, submit, and update emergency medical services plans for Space Shuttle launches and landings, exercises and simulations, and training for medical personnel providing this support (ref. DRD 007).

5.1.2. Space Shuttle Medical Support

The Contractor shall provide standby support to exercises and simulations, medical personnel training, emergency medical operations at KSC and emergency and general medical standby support during Space Shuttle operations; general management of designated medical examination activities and facilities including interfacing with other organizations, inventory control of all on-hand medical (including pharmaceutical) supplies and equipment and routine patient care as needed.

5.1.3. Pre- and Post Crew Medical Care

The Contractor shall provide services of aerospace physicians, clinical nursing specialists and medical technologists to the medical operations support group during the conduct of crew support activities associated with pre- and post-flight phases of all Space Shuttle and Space Station missions (ref. Appendix 2). These services, at a minimum, include: discrete crew requirements for support of crew physicals, for medical monitoring, for designated prime crew contact examination, and for flight and control experiments involving humans as subjects.

The Contractor shall be Joint Commission for Accreditation of Health care Organizations (JCAHO) (Ambulatory Care Standards) accreditable within 24 months after contract start.

The Contractor shall assist NASA Flight Surgeons in activities including Detailed Supplemental Objectives, Detailed Test Objectives, and other pre- and post-flight human research.

5.1.4. Spaceflight Medical Support Training Course

The Contractor shall plan for and conduct the Annual KSC Space Flight Medical Support Training Course. This course is designed to familiarize medical personnel specified by the COTR who support Space flight launch and landing activities with specific medical concerns associated with KSC launch and landing activities. (These medical personnel currently include designated individuals from Shands Teaching Hospital, Parrish Medical Center, Orlando Regional Medical Center, Florida Hospital, Holmes Regional Medical Center, Halifax Medical Center, Cape Canaveral Hospital, Wuesthoff Hospital, and the Department of Defense.)

5.2 Crew, Workforce, and Planetary Protection

The Contractor shall conduct microbiological and toxicological sampling and analysis of KSC flight crew quarters and of spacecraft cabin areas, including potable water systems and waste management areas, as specified in approved program requirements and procedures (ref. MORD JSC 13956 and Appendix 3). Samples and analyses shall be made using program approved protocols and results made available according to programmatic and flight requirements in support of established operational schedules.

The Contractor shall provide a continuing and comprehensive evaluation of specific interior areas of the Space Shuttle, Space Station, and spacecraft refurbishment facilities for the quantitative presence of certain viable microorganisms, including and emphasizing potential pathogens in accordance with "KSC Payload Facility Contamination Control Requirements/Plan," K-STSM-14.2.1. The Contractor shall assure that these data will serve as background for evaluation of any changes in the quantitative and qualitative microbial population in the spacecraft as a result of the Space Shuttle Program and subsequent Operational Flight Programs.

The Contractor shall select and schedule test subjects to participate in the KSC Life Sciences operational studies. As a general policy subjects will be selected from KSC civil service personnel, the Contractor's personnel, or other on site Contractor personnel on a voluntary basis whenever such personnel satisfy test subject requirements. When these means are inadequate, the Contractor shall recruit from external sources (ref. NPD 7100.8, "Protection of Human Research Subjects"). In addition, the Contractor shall assure adequate and prompt medical care and shall assure that adequate compensation for subjects or for subjects' beneficiaries is available through insurance mechanisms if a subject suffers illness, disease, injury, loss of body member, or death as a result of participation in human testing.

The Contractor shall perform microbiological testing of interplanetary spacecraft per NHB 5340.1B, "NASA Standard Procedures for Microbiological Examination of Space Hardware" to ensure sterility of the spacecraft at launch. The Contractor shall also provide microbiological testing in support of any sample returned to Earth missions.

5.3 Physical Fitness and Health Awareness Program

The Contractor shall administer a Physical Fitness Exercise Program and oversee the use and maintenance of the exercise equipment.

The Contractor shall operate and monitor the usage of existing exercise facilities (ref. Appendix 6) that are available to all on-site federal and Contractor personnel. The Contractor shall provide personal fitness assessments, personal training, exercise classes, and motivational programs.

The Contractor shall provide fitness expertise in a Health Awareness Program that implements preventive medicine and health promotion activities for employees at KSC, such as cardiovascular risk factor reduction activities, fitness assessments, and back injury reduction.

The Contractor shall develop and manage designated special events including exercise competitions and group sponsorships intended to promote and enhance physical fitness and health.

5.4 Musculoskeletal Rehabilitation Program

The Contractor shall provide a Musculoskeletal Rehabilitation Program and provide maintenance of its related equipment.

The Contractor shall coordinate activities with the KSC Occupational Health personnel, offsite health care providers, workers' compensation specialists, and the KSC Fitness Centers to optimize injury reduction, injury rehabilitation, and return to work.

The Contractor shall implement preventive medicine and health promotion activities, such as ergonomics, repetitive motion injury reduction and rehabilitation, back injury reduction, and others.

6.0 Agency Occupational Health

6.1 Occupational Health Program Assessment

The Contractor shall provide expertise to the Agency Occupational Health Program Office during its assessment and documentation of the present status of NASA's Occupational Health Program (OHP). This service requires personnel possessing the requisite knowledge and experience in occupational medicine (physicians and nursing) and environmental health (industrial hygiene). The NASA program office is required to perform a full-scale assessment of the status of all NASA centers' implementations of the Program with appropriate reporting to, and liaison with, the NASA Headquarters overseeing officials. The program office assessment includes, at a minimum, site visits to each NASA center on a two year cycle; inventory and evaluation of facilities, resources, and practices at each center; essential data documentation and reporting; and individual center program evaluations.

The Contractor shall develop a quality assurance program, and develop occupational health initiatives, programs, and draft-policies. The Contractor shall make recommendations for enhanced future OHP operation and management. DRD 014 shall be followed for documenting and reporting recommendations.

The Contractor shall maintain and make enhancements to the Occupational Health Program web site and maintain security and operation of the independent server.

6.2 Occupational Health Program Administration Management Services

The Contractor shall provide expertise to support administration, execution, and operational management of the Agency OHP, in accordance with responsibilities directed by NPD 1800.2, "NASA Occupational Health Program" (ref. Appendix 3).

These functions require specific discipline skills in occupational medicine and environmental health, as well as, health information management expertise. Continual surveillance of, and assistance to, the implementing programs at the NASA centers is required. This includes periodic center site visits and solicitation, compilation, and reporting of required summary data for NASA Headquarters offices and external organizations. DRD 015 details the major reporting requirements.

6.3 Health Information Management System Services

The Contractor shall develop, implement, and maintain an integrated NASA Health Information Management System database containing center specific data.

Statement of Work
Appendix 1

Data Requirements List

Data Requirement Deliverables

The Contractor shall provide an electronic copy of all data deliverable items to the Contracting Officer and keep a log of data deliverables including publications throughout the life of the contract. The log shall identify the item, segregated by item type, date delivered, NASA office of primary responsibility, date accepted by NASA, and other applicable data necessary. The updated log shall be provided with the Contractor Performance Assessment report each quarter (ref. DRD 002)

INSTRUCTIONS FOR COMPLETING CONTRACT APPLICATION INFORMATION

A. LINE ITEM NO. Sequentially number line items beginning with number 001.

B. LINE ITEM TITLE - Enter the title of the data item, as shown in the Statement of Work (SOW), the RFP and/or as directed by the CTM.

C. OPR (OFFICE OF PRIMARY RESPONSIBILITY) - Enter the organization designated to exercise technical and or administrative control over the data requirement. Use approved organizational code.

D. TYPE - Enter "Type of Data" code as follows:

CODE	DESCRIPTION
1	Data requiring written approval by the procuring activity prior to implementation into the procurement or development program.
2	Data submitted to the procuring activity for review not later than three weeks prior to project implementation. Data shall be considered approved unless the contractor has been notified of disapproval prior to project implementation.
3	Data submitted to the procuring activity for coordination, surveillance, or information.
4	Data retained by the contractor to be made available to the procuring activity upon request. The contractor shall furnish a list to the procuring activity.
5	Data to be retained by the contractor and reviewed by NASA on request.

E. INSPECT/ACCEPT - Enter Inspection Acceptance code as follows:

CODE	INSPECTION	ACCEPTANCE	CODE	INSPECTION	ACCEPTANCE
1	Source	Source	4	Certificate of Conformance	(Mandatory)
2	Destination (OPR)	Destination (OPR)	5	Certificate of Conformance	(Optional)
3	Source	Destination (OPR)	6	No Inspection Required	No Acceptance Required

F. FREQ. OF SUBM. - Enter the frequency of submission code as follows:

CODE	DESCRIPTION	CODE	DESCRIPTION	CODE	DESCRIPTION
AD	AS DIRECTED	PC	PER CONTRACT	PV	PER VEHICLE
AN	ANNUAL	PD	PER FAILURE	QU	QUARTERLY
AR	AS REQUIRED	PE	PER EVENT	RD	AS RELEASED
BE	BIENNIAL	PF	PER FACILITY	RT	ONE TIME & REVISIONS
BM	BIMONTHLY (every two months)	PG	PER PROGRAM	SA	SEMI ANNUALLY
BW	BIWEEKLY (every two weeks)	PI	PER EQUIPMENT END ITEM	SM	SEMI MONTHLY
DA	DAILY	PJ	PER PROJECT	TY	THREE YEAR PERIOD
DD	DEFERRED DELIVERY	PL	PER LAUNCH FLIGHT MISSION	UR	UPON REQUEST
MO	MONTHLY	PS	PER SYSTEM	WK	WEEKLY
OT	ONE TIME	PT	PER TEST		

G. INITIAL SUBMITTAL - Enter date of initial submittal as follows: Month, Day, Year. If calendar date is not scheduled, enter number of days preceding, or following, event to which the data requirement is related (e.g., 90 days prior to launch). Amplify in REMARKS, Item J, if necessary.

H. AS OF DATE - For "Onetime Only" submittals, enter date by month/day/year. For recurring submittals, enter number coding (e.g., 30/10, 90/10, 15/5, etc.). The first digit(s) indicate the number of calendar days from the reporting period's (Block F) start to the data preparation cut off. The second digit(s), after the slash, indicate the number of calendar days from the cut off to the submittal date. Example: If Block F were "MO" and Block H were "30/10", the data would include the entire month and would be submitted within 10 days thereafter.

J. REMARKS: Enter in this space:
   a. Minor exceptions to the DRD.
   b. Stipulation of specific forms when multiple forms are authorized on the DRD.
   c. The paragraph, page, etc., in an existing contract where the data requirement is specified. (This data may be removed at final approval.)
   d. Additional submittal information, if necessary.

K. DISTRIBUTION - Enter organizational symbol, number of copies, and type of copy code(s) (in parenthesis) required for each office. Type of copy codes are as follows:

CODE	DEFINITION	CODE	DEFINITION
A	Regular	C	Microfilm, Aperture Cards
B	Reproducible	D	Other, (Explain in remarks, Item J).

EXAMPLE ENTRIES: IS-PRO-2 (1A) = One regular copy. IS-PRO-3 (5 A, 1B) = Five Regular copies, One Reproducible copy. Enter the total number of copies by type in the space provided

INSTRUCTIONS FOR COMPLETING DATA REQUIREMENT DESCRIPTION

GENERAL - The Data Requirement Description (DRD) will be prepared to describe the content and provide preparation information for data required in support of NASA programs.

1. TITLE - Enter the title or type of document required. The first word of the title should be a principal noun which best established the basic concept of the data. Subsequent words should be appropriate modifiers.
   Examples: Plan, Project Development (SIVB)
   Specification, Test (GSE)
   Report, Quarterly Progress
   Proposal, Engineering change (ECP)
2. NUMBER - Enter the appropriate number assigned to the DRD. This number will identify the appropriate data category.
3. USE - Enter a synopsis of the use of the document, stating reason for the requirement.
4. DATE - Enter date of preparation.
5. ORGANIZATION - Identify the installation preparing the DRD.
6. REFERENCES - List applicable documents by number, (NASA Management Manual, Mil Specifications, Federal Standards, NASA Procurement Regulation, etc.,) to which the preparing office (e.g., NASA installations, contractors, etc.) may refer for additional information concerning the data requirement.
7. INTERRELATIONSHIP - Enter all affected approved DRDs within the scope of the program when the DRD under preparation creates a significant impact or interface relationship with existing DRDs. Include a brief narrative of the impact or relationship created and a statement that the new DRD does not cause a conflict with other DRDs.
8. PREPARATION INFORMATION - Provide ample information for preparation of the data required by the data requirements description; include all necessary details of preparation to satisfy the originator's formal requirements.

DATA REQUIREMENTS LIST

DRL NUMBER:

PROJECT/SYSTEM Life Science Services Contract	REVISION
CONTRACT NUMBER	
CONTRACTOR	PREPARATION DATE 4/17/01
ATTACHMENT NUMBER	TECHNICAL APPROVAL
	EXHIBIT NUMBER

ITEM NO.	TITLE	CHANGE STATUS
1	Report, Contractor Financial Management (NASA Form 533 M)	
2	Reports, Contractor Performance Assessment	
3	Schedules, Flight Experiment Payload Development	
4	Report, Quarterly Air Quality Summary	
5	Report, Annual KSC Environmental Summary	
6	Plan, Long Term Ecological Program	
7	Plan, Space Shuttle Medical Operations Support	
8	Plan, Space Shuttle Ecological Launch Preparations	
9	Report, Post-Launch Ecological Impact	
10	Plan, Safety	
11	Report, Safety Statistics	
12	Report, Investigation of Mishaps	
13	Plan, Reliability and Quality Assurance	
14	Report, Occupational Health Program (OHP) Assessment	
15	Reports, Occupational Health Program Management	
16	Plan, Quality Systems Management	
17	Maps and Databases, Ecological Systems	
18	Reports, Annual Summary of Animal Use	
19	Plan, IT Security	
20	Report, Equal Employment Opportunity	
21	Report, Motor Vehicle Utilization	
22	Report, Monthly KSC Headcount	
23	Report, Monthly Purchase Order	
24	Plan, Facility/Laboratory Utilization	
25	Plan, Cost Phasing	
26	Plan, Emergency Preparedness	
27	Plan, Internal Surveillance	
28	Plan, Risk Mitigation	

KSC FORM 16-245 (REV 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

Page 1 of _2_

B. LINE ITEM TITLE:	A. ITEM NO.
Report, Contractor Financial Management (NASA Form 533M)	001

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
GG-C-B1	3	6	MO	See Block J	See Block J

J. REMARKS:

Block G: The initial submittal of NASA Form 533M shall begin no later than the 15th calendar day after the end of the first calendar month of contract performance.

Block H: As of date based on Contractor monthly accounting period cut-off-date.

K. DISTRIBUTION

GG-C-A2
GG-B-C2
GG-B-B1
OP-OS
DCAA
YA-A

TOTALS NO.	TOTALS TYPE

DATA REQUIREMENT DESCRIPTION

1. TITLE

Report, Contractor Financial Management (NASA Form 533M)

2. NUMBER

3. USE

To provide financial management cost and financial data for ensuring that contractor operations are efficiently planned and managed.

4. DATE

5. ORGANIZATION

7. INTERRELATIONSHIP

6. REFERENCES

NPD 9501.1G
NPG 9501.2C

8. PREPARATION INFORMATION

A. Prepare NASA Forms 533M per instruction NPG 9501.2C. Refer to sample 533 reporting format for desired report periods and cost elements to be presented.

B. The reports shall be submitted electronically no later than 15th calendar day following the close of the contractor's monthly accounting period.

C. The Contractor shall furnish with the initial NF533M its accounting calendar that lists the accounting periods, number of workdays included in each period, and all holidays. All subsequent revisions shall be provided at the time of the change. At a minimum, an updated accounting calendar shall be provided at the beginning of each government fiscal year.

D. The reports shall include the following summaries:
   1. Total Contract
   2. WBS Level Summary (1.0, 2.0, 3.0, 4.0, 4.1, 4.2, 5.0, 6.0)
   3. Mission Plan Element Summary

E. Contractors are required to indicate full-incurred costs on the NF533 Report. At the end of each fiscal year, upon submittal of final indirect cost rates, provisional billing rates shall be changed to the proposed final rates. The Contractor shall include all adjustments in the current month actual costs column of the NF533, itemizing the adjustments in an addendum to the report.

F. Cost figures shall be reported to the nearest whole dollar, equivalent headcount shall be reported to the nearest tenth, and hours shall be reported to the nearest whole hour.

G. Mission Plan Element level reports shall annotate specific NASA Unique Project Number (UPN) costs based on NASA-supplied percentages for "labor" and "non-labor" charges.

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

Page 2 of _2_

A. ITEM NO.
001

B. LINE ITEM TITLE:
Report, Contractor Financial Management (NASA Form 533M)

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
GG-C-B1	3	6	MO	See Block J	See Block J

J. REMARKS:

Block G: The initial submittal of NASA Form 533M shall begin no later than the 15th calendar day after the end of the first calendar month of contract performance.

Block H: As of date based on Contractor monthly accounting period cut-off-date.

K. DISTRIBUTION
See page 1

TOTALS	
NO.	TYPE

DATA REQUIREMENT DESCRIPTION

1. TITLE
Report, Contractor Financial Management (NASA Form 533M)

2. NUMBER

3. USE
To provide financial management cost and financial data for ensuring that contractor operations are efficiently
nned and managed.

4. DATE

5. ORGANIZATION

7. INTERRELATIONSHIP

6. REFERENCES
NPD 9501.1G
NPG 9501.2C

8. PREPARATION INFORMATION

H. Each NF533M shall contain an estimate for the next two months and for the balance of the contract year. This estimate shall include all anticipated hours and costs.

I. The Contractor shall provide a variance analysis for any 5% exceedance for each element of cost of the difference between the *actual* and *plan* for the current month. The variance analysis is required at the Mission Plan Element level.

J. For any indirect rate (such as overhead, G&A, etc.) charged to the contract, the Contractor is to identify in the narrative to the NF533M the provisional billing rates, ceiling rates and cumulative actual rates for the contract.

K. Data elements to be reported include all cost elements included in the negotiated contract estimated cost.

L. Any revisions to the Contractor's 533 submittal shall be provided to NASA via a corporate letter inclusive of revised replacement pages with an explanation for the revisions.

SC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

B. LINE ITEM TITLE: Contractor Performance Assessment					A. ITEM NO. 002
C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
YA	3	2	See J	1 Week Following ATP	See J

J. REMARKS:
F/H Prepare as per column 8 below on these frequencies and due dates based on contract year:
1. Annual (365/30)
2. Quarterly (90/15)
3. Weekly (7/5)

K. Electronic Media required for all submissions.

K. DISTRIBUTION	ANNUAL	QUARTERLY	WEEKLY	TOTALS NO.	TOTALS TYPE
YA-A	1A 1D	1A 1D	1A 1D		
OP-OS	1D	1D	1D		
UB-E	1D	1D	1D		
TA-C	1D	1D	1D		
TOTALS	1A, 4D	1A, 4D	1A, 4D		

DATA REQUIREMENT DESCRIPTION

1. TITLE CONTRACTOR PERFORMANCE ASSESSMENT

2. NUMBER

3. USE
Ascertain status, document history and project changes during contract performance.

4. DATE

5. ORGANIZATION
KSC/YA

6. REFERENCES

7. INTERRELATIONSHIP
DRD 010, 013, 016, 024, 027, & 028

8. PREPARATION INFORMATION

1. An annual report of life sciences activities summarizing all Mission Plan Milestones and Deliverables and data to support the Governmants Performance Evaluation Plan will be provided.

2. A quarterly report all Mission Plan Milestones and Deliverables and data to support the Governmants Performance Evaluation Plan will be provided.. The purpose of this report is to provide a Contractor/NASA senior management basis for discussion on the status of contract activity. The report will be in the form of briefing charts that addresses the summary level highlights of the past quarter's activities. The briefing should also provide a Mission Plan Element summary level discussion of planned versus actual costs and any actions required or proposed to assure performance to the cost plan. Management issues of concern to the contractor should be presented. If the Contracting Officers Technical Representative has specific management issues for the Contractor to discuss, they will be provided two weeks prior to the scheduled briefing. Fourth quarterly report is not required as such, but will be combined with the annual report.

3. A weekly summary of key activities, two to four pages in length, provided in letter form.

4. The reports shall address the results of contractor's Internal Surveillance Plan and accomplishment of the critical performance element metrics identified in the Government Performance Evaluation and Award Fee Plan.

. Identify all actions taken within the reporting period toward meeting the requirements in SOW Section 1.3.1. The Contractor shall lentify all issues, problematic areas, and identified deficiencies in complying with OSHA VPP Star certification requirements.

SC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

B. LINE ITEM TITLE:	A. ITEM NO.
Plan, Flight Experiment Payload Development	003

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
UB-E	1	2	See J	30 days after contract start	Contract Start

J. REMARKS:

1. Prepare monthly update for each flight experiment/payload assigned to KSC.

K. DISTRIBUTION

UB-E 1A 1D
YA-D3 1A
YA-A 1A

TOTALS NO.	TYPE

DATA REQUIREMENT DESCRIPTION

1. TITLE	2. NUMBER
Plan, Flight Experiment Payload Development	
3. USE	**4. DATE**
To provide experiment/payload information for project management.	
INTERRELATIONSHIP	**5. ORGANIZATION**
DRD 024, DRD 002	KSC/YA, UB
8. PREPARATION INFORMATION	**6. REFERENCES**

A. The monthly plan will include:
   a. Experiment Summary Table for each Research Program customer
      i. Experiment NRA number and title
      ii. Principal Investigator name
      iii. Development Phase initiation/termination dates
      iv. Targeted mission/flight
      v. Flight Hardware required
      vi. General Comments

   b. Experiment Report for each experiment/payload
      i. Narrative Information
         1. relevant status
         2. upcoming milestones
         3. issues
         4. risk management summary
         5. general experiment/payload parameters and team members
      ii. Detailed Progress Schedules
         1. schedules will be "base-lined" annually at the beginning of each fiscal year
         2. milestone and activity deviations/slips will be referenced against the base-lined schedule

   c. A single integrated schedule depicting experiment phases and major milestones (SVT/PVT/Hardware delivery/Launch) for all experiments/payloads

B. All schedules and information sheets will utilize standard formats

C. Information will be made available electronically

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

B. LINE ITEM TITLE:	A. ITEM NO.
Report, Quarterly Air Quality Summary	004

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
TA-C	3	2	QU	See J	90/30

J. REMARKS:

G. On calendar quarters (J-M, A-J, J-S, O-D)

K. DISTRIBUTION

YA (1A)
YA-D3 (1A)
TA-C (2A)

TOTALS NO.	TOTALS TYPE
4	A

DATA REQUIREMENT DESCRIPTION

1. TITLE	2. NUMBER
REPORT, QUARTERLY AIR QUALITY SUMMARY	
3. USE	**4. DATE**
Document air quality and identify results that exceed EPA standards.	
7. INTERRELATIONSHIP	**5. ORGANIZATION**
DRD 006	KSC/YA
8. PREPARATION INFORMATION	**6. REFERENCES**

1. Quarterly averages for O3, SO2, NO, CO, temperature, humidity, and precipitation amounts by sample sites.
2. Maximum and minimum for each day and the hourly concentrations for O3, SO2, NO, & CO,.
3. Tabulation of wind speed and direction data by sites.
4. Identification of all that exceeded Federal or State standards.
5. Averages of analysis results or precipitation samples – standard physical and chemical measures.
6. Discussion of significant results.

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

B. LINE ITEM TITLE:	A. ITEM NO.
Report, Annual KSC Ecological Summary	005

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
TA-C	5	6	AN	1/15/03	365/15

J. REMARKS:

K. DISTRIBUTION

TA-C (1A) (1D)
YA-D3 (1A)
YA-A (1A)
FWS (1A), NPS (1A)

TOTALS NO.	TYPE
5	A
1	D

DATA REQUIREMENT DESCRIPTION

1. TITLE
Report, Annual KSC Ecological Summary

2. NUMBER

3. USE
To provide insight to the ecological condition of the Kennedy Space Center. The reports will be used as part of the historical database documenting the long-term impact of the space industry on this ecosystem.

4. DATE

5. ORGANIZATION
KSC

7. INTERRELATIONSHIP
DRD 006 DRD 017

6. REFERENCES

8. PREPARATION INFORMATION

The Contractor shall submit an annual report on the conditions of the KSC natural ecosystem including statistical and trend analysis for water, air, threatened and endangered species and all other ecological parameters.

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

B. LINE ITEM TITLE:					A. ITEM NO.
Plan, Long Term Ecological Program					006
C. OPR	**D. TYPE**	**E. INSPECT/ ACCEPT**	**F. FREQ.**	**G. INITIAL SUB.**	**H. AS OF DATE**
YA-D3	1	2	RT	90 days after ATP	365/20

J. REMARKS:

Update of this plan as requested by TA-C

K. DISTRIBUTION

YA-A	(1A)	(1D)
YA-D3	(1A)	
TA-C	(1A)	
National Park Service	(1A)	
U.S. Fish & Wildlife Service	(1A)	

TOTALS	
NO.	TYPE
5	A
1	D

DATA REQUIREMENT DESCRIPTION

1. TITLE

PLAN, LONG TERM ECOLOGICAL PROGRAM

2. NUMBER

3. USE

Prepared to provide overall strategic and program guidance for ecological program support.

4. DATE

5. ORGANIZATION

KSC/TA/YA

7. INTERRELATIONSHIP

DRDs 005, 008, 009, 017

6. REFERENCES

Ecological Program Plan dated 1995

8. PREPARATION INFORMATION

The plan will provide:

1. Overall scope and basis for the ecological program
2. Program summary
3. Program strategy
4. Management approach
5. Schedule of all activities
6. Resources
7. References

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

B. LINE ITEM TITLE: Plan, Space Shuttle Medical Operations Support

A. ITEM NO. 007

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
TA-C2	3	2	AN (1& 2) AR (3 & 4)	90 days after ATP See J	365/30

J. REMARKS:

Medical plans and appropriate revisions, dictated by the launch schedule, are required as requested by NASA-Medical prior to each Space Shuttle launch (see components 1,2, and 3 in item 8 below).

K. DISTRIBUTION	1 & 2 (each)	3 & 4
YA-A	1A	1A
TA-C2	10A	25A
Totals	11A	26A

TOTALS NO.	TOTALS TYPE

DATA REQUIREMENT DESCRIPTION

1. TITLE: PLAN SPACE SHUTTLE MEDICAL OPERATIONS SUPPORT

2. NUMBER

3. USE: Prepared to provide a description of medical operations support to Shuttle activities

4. DATE

ITERRELATIONSHIP: See DRD 008 and DRD 016

5. ORGANIZATION: KSC Medical

6. REFERENCES: KBM-PL-1.2E, KBM-PL-1.1C

8. PREPARATION INFORMATION

Prepare plans which provide descriptions of the activities to meet medical operations requirements for Shuttle launch and landing support. These plans shall emphasize both routine and emergency medical support as well as any ancillary support, e.g., laboratory services. They shall consist of the following documentation:

1. KSC Medical Operations Support Implementation Plan (MOSIP)
   - Frequency: Initial Plan within one year after ATP, then as needed thereafter.
2. KSC Emergency Medical Services (EMS) Plan
   - Frequency: Initial Plan within one year after ATP, then as needed thereafter.
3. Medical Package for Launch and Landing
   - Frequency: Prior to each launch in support of Medical Readiness Meeting and prior to landing and Terminal Count Down Test
   - Provide plans for confirming all necessary medical preparations for launch and landing, including:
     1. Launch and landing timelines
     2. General mission information
     3. Launch and landing deployment staging maps
     4. General communications listing
     5. Personnel duty, notification tree, and on-call schedules
     6. Triage site maps
     7. Hospital emergency contacts and resources
     8. Flight crew identification, seating and configuration
     9. Special preparations and unique requirements
4. Mission Report
   - Frequency: Within 30 days of conclusion of Shuttle mission

ORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

B. LINE ITEM TITLE: Plan, Space Shuttle Ecological Launch Support					A. ITEM NO. 009
C. OPR. YA-D3, TA-C	D. TYPE 3	E. INSPECT/ ACCEPT 2	F. FREQ. See J	G. INITIAL SUB. See J	H. AS OF DATE See J

J. REMARKS:

Submit thirty days after contract award and update as necessary

K. DISTRIBUTION

YA-A (1A)
YA-D3 (1A)
TA-C (1A)

TOTALS NO.	TOTALS TYPE
3	A

DATA REQUIREMENT DESCRIPTION

Plan, Space Shuttle Ecological Launch Preparations

2. NUMBER

3. USE

Determines readiness of ecological support to Space Shuttle launch

4. DATE

5. ORGANIZATION TA-C

7. INTERRELATIONSHIP

DRD009

6. REFERENCES

8. PREPARATION INFORMATION

Provide plan confirming all necessary ecological monitoring preparations for Space Shuttle Launch, including:

1. Key personnel assignments
2. Timelines for major activities
3. Communications readiness and console checkout procedure
4. Equipment selection and assignments
5. Security coordination
6. Special preparations and unique requirements

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

A. ITEM NO. DRD 009

B. LINE ITEM TITLE:
Reports, Post-Launch Ecological Impact

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
YA-D3, TA-C	3	2	See J	See J	See J

J. REMARKS:

1. Provide a "quick-look" report within 48 hours after launch according to block 8 below.

2. Provide a Post-Launch Summary Report as requested.

K. DISTRIBUTION

YA (1A), YA-D3 (5A), FWS (1A), NPS (1A), USA Env. (1A), SGS Env Health (1A)

XA (1A), TA-C (2A)

TOTALS NO.	TYPE
13	A

DATA REQUIREMENT DESCRIPTION

1. TITLE Reports, Post-Launch Ecological Impact

2. NUMBER

3. USE
Assess ecological effects of launch and recommend control measure if needed.

4. DATE

5. ORGANIZATION
KSC/TA and YA

7. INTERRELATIONSHIP
DRD 006 and DRD 008

6. REFERENCES

8. PREPARATION INFORMATION

Provide reports following Space Shuttle launch:

Quick look report to include:
- Final REEDM plot with input weather conditions noted
- Initial assessment of model; prediction vs. actual deposition based on ground truth monitoring
- Identification of initial significant findings

Post launch summary report to include:
- Narrative of console operations, noting any announcements made
- Final assessment of REEDM prediction vs. ground truth (mapped)
- Summarization and analysis of data collected
- Identification of significant findings
- Identification of problems encountered
- Discussion of results and significance to KSC operations
- Suggested corrective actions for ecological problems noted

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

B. LINE ITEM TITLE:	A. ITEM NO.
Plan, Safety and Health	010

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
YA-B	1	2	RT	See Block J	See Block J

J. REMARKS:

The Contractor shall submit its Safety and Health plan with its proposal and it shall maintain the plan through the life of the contract. NASA will review, make recommendations, and maintain approval authority over all updates to this plan prior to incorporation into the contract.

K. DISTRIBUTION

YA-B (1A)
QA (1A)
YA-A (1A)
OP-OS (1A)
TA-C (1A)

TOTALS NO.	TOTALS TYPE
5	A

DATA REQUIREMENT DESCRIPTION

1. TITLE: Plan, Safety and Health

2. NUMBER:

3. USE: To define the Contractor's safety and work health programs. It addresses activities and related controls for the protection of personnel, equipment, and supplies and compliance with the NASA and KSC Safety programs.

4. DATE:

5. ORGANIZATION: KSC /TA/YA

6. REFERENCES: NPD 8710.2, NPD 8700.1

7. INTERRELATIONSHIP: DRD 002, 011, 012, 026, & 027

8. PREPARATION INFORMATION

1. The Safety plan defines a comprehensive safety and health program in accordance with the applicable safety and health policy documents.
2. The Safety and Health Plan shall be submitted with the Contractor's proposal.
3. The format of this plan shall be at the discretion of the contractor but shall include:
   - Safety procedures to be followed,
   - Safety analyses to be performed,
   - Hazardous operations to be monitored,
   - Safety walk downs and inspections to be conducted
   - Methods for safety review and concurrence of hazardous procedures and work authorization documents,
   - Methods for resolution safety problems,
   - Methods for safety investigations and reporting of incidents/accidents (DRD 011 and 012),
   - Methods for tracking of open hazard data and safety problems,
   - Methods for compliance with applicable environmental health requirements,
   - Hazardous communications program and accident prevention program,
   - Define safety chain of command within the contract.
4. The Safety Plan shall be maintained current

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

B. LINE ITEM TITLE:	A. ITEM NO.
Report, Safety Statistics	011

C. OPR.	D. TYPE	E. INSPECT/	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
TA-C1	3	6	QU	See J	See J

J. REMARKS:

Report due by the 10th of: January, April, July, and October. The initial report shall be submitted on the first reporting period after contract award.

K. DISTRIBUTION

TA-C1 (1A) OP-OS (1A)
YA-A (1A)
YA-B (1A)
QA-D (1A)

TOTALS NO.	TOTALS TYPE
5	A

DATA REQUIREMENT DESCRIPTION

1. TITLE Report, Safety Statistics

2. NUMBER

3. USE
To provide Contractor mishap and mishap exposure information.

4. DATE

5. ORGANIZATION
TA-C1

7. INTERRELATIONSHIP

6. REFERENCES
KHB 1710.2

8. PREPARATION INFORMATION

Mishap statistical information shall be reported on KSC Form 6-22. Cumulative totals shall be by fiscal year. The report shall be submitted quarterly as specified in Block J above.

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

B. LINE ITEM TITLE:	A. ITEM NO.
Report, Investigation of Mishaps	012

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
YA-B	3	6	AR/PE	See Block 8	

J. REMARKS:

K. DISTRIBUTION

YA-A (1A) OP-OS (1A)
YA-B (1A)
TA-C1 (1A)
QA (1A)

TOTALS NO.	TYPE
4	A

DATA REQUIREMENT DESCRIPTION

1. TITLE Report, Investigation of Mishaps

2. NUMBER

3. USE
Notification of mishaps and close calls

4. DATE

5. ORGANIZATION
QA

7. INTERRELATIONSHIP

6. REFERENCES
KHB 1710.2
NPG 8621.1

8. PREPARATION INFORMATION

All mishaps and close calls shall be reported.

Immediate notification of all incidents with the potential for being classified as a mishap or close call shall be reported to the NASA TA-C1 (Chief of the NASA Operations Safety Office, Steven.Brisbin-1@ksc.nasa.gov) within four hours or prior to the end of the shift, whichever is first.

- For incidents occurring on evening or night shifts, the report must be received by 6:45 a.m.

The information shall be provided using NASA Form 1627 or a contractor's approved form. A follow-up report shall be sent within three days of the initial report or within one day of mishap categorization, whichever is less.

For incidents that do not to meet the definition of a mishap or close call as specified in NPG 8621.1, the follow-up report shall consist of a written assessment as to why the incident should not have been classified as a mishap or close call.

For incidents categorized as mishaps, the follow-up report shall consist of an initial NASA Mishap Report (white copy of NASA Form 1627). A completed NASA Mishap Report (yellow copy of NASA Form 1627) or investigation status report shall be provided within 10 days of the initial NASA Form 1627 submittal.

Serious mishaps (Type A, Type B, or Type C damage) shall be reported by telephone to the NASA TA-C1at 867-SAFE, 867-6133, or 867-6695 within one hour.

The mishap must be entered in the NASA Incident Reporting Information System (IRIS) within 24 hours and updated with new information as appropriate.

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

A. ITEM NO. 013

B. LINE ITEM TITLE:
Plan, Reliability and Maintainability

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
YA-B	3	6	RT	See Block J	See Block J

J. REMARKS:

The Contractor shall submit its Reliability and Maintainability plan in summary form with its proposal. The plan shall be completed within 60 days after contract award and maintained throughout the life of the contract.

K. DISTRIBUTION

YA-A (1A)
YA-B (1A)
TA-C1 (1A)
QA (1A)

TOTALS NO.	TYPE
4	A

DATA REQUIREMENT DESCRIPTION

1. TITLE Plan, Reliability and Maintainability

2. NUMBER

3. USE

To define the Contractor's Reliability and Maintainability programs. It addresses activities preformed within this contract and in compliance with the NASA and KSC Reliability and Quality Assurance programs.

4. DATE

5. ORGANIZATION
QA

INTERRELATIONSHIP
DRD 002 & 027

6. REFERENCES
NSTS 5300.4 (1D-2)
KHB 5310.1

8. PREPARATION INFORMATION

1. The R&M Plan should serve as the Master planning and control document for the contractor's R&M Program. The plan should describe the contractor's approach and describing "what" will be done and method of management of each task in terms of when, by which organization, and be in a format that identifies contractual requirements.

2. The plan should show the relationship to the individual managing the R&M program with each element performing R&M program tasks, including authority to control and monitor cited tasks.

3. The R&M should not contain detail "how to " statements or include implementing procedures or instructions on the Contractor's methodology of executing his program requirements, approach, and criteria, leaving the implementation verbiage to the procedures.

4. As an attachment to the R&M plan, the contractor should list his implementing procedures by subject.

5. The R&M plan should list in the body or include any corporate procedure numbers in the narrative statements. However, the plan can include higher level NASA/Government documentation references, e.g., NSTS 5300.4 (1D-2).

6. The R&M plan shall meet the intent of NSTS 5300.4 (1D-2) and written in the general format of the KHB.

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

A. ITEM NO. 014

B. LINE ITEM TITLE:
Report, Center Occupational Health Program (OHP) Assessment

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
QA-D	4	3	AD	AD	AD

J. REMARKS:

Agency OHP assessments of NASA Centers are required in order to determine regulatory and programmatic compliance for the OHP disciplines and to update and implement state-of-the-art practices.

Database output maybe requested in either written reports (A) form or electronic media (D) form.

K. DISTRIBUTION

QA (1A,1D)
QA-D (1A,1D)

TOTALS NO.	TYPE
2	A
2	D

DATA REQUIREMENT DESCRIPTION

1. TITLE
Report, Occupational Health Program (OHP) Assessment

2. NUMBER

3. USE
To provide a current inventory, evaluation and regulatory and programmatic assessment of occupational health programs at each NASA Center

4. DATE

5. ORGANIZATION
QA

7. INTERRELATIONSHIP

6. REFERENCES
NPD 1800.2A,
NPD 1810.2A
NPD 1820.1A

8. PREPARATION INFORMATION

a. Develop assessment checklists based upon NASA requirements for each programmatic element of the OHP.
b. Compile report and enter discrete date into OHP database for the on-site program assessment at the Centers with discipline specific subject matter experts in occupational health, nursing and wellness, and industrial hygiene as requested by the Principal Center for Occupational Health.
c. Make data from OHP database available as required to the Principal Center for Occupational Health.

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

A. ITEM NO. 015

LINE ITEM TITLE:
eports for Occupational Health Program Management

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
QA-D	1	3	AD	AD	AD

J. REMARKS:
Agency OHP management requires several and varying reports for internal and external use (see item 8).

All written reports (A) will be submitted with accompanying electronic media (D).

K. DISTRIBUTION

QA (1A,1D)
QA-D (1A,1D)

TOTALS NO.	TYPE
2	A
2	D

DATA REQUIREMENT DESCRIPTION

1. TITLE Reports, supporting Agency OHP Management

2. NUMBER

3. USE
To provide Agency and external organizations mandated and managerially required information.

4. DATE

5. ORGANIZATION
QA

7. INTERRELATIONSHIP

6. REFERENCES
NPD 1800.2A,
NPD 1810.2A,
NPD 1820.1A

8. PREPARATION INFORMATION

a. Report (periodic) of center programmatic assessments
b. Reports (periodic) of OHP database development
c. Reports (periodic) of OHP web site utilization
d. Report (periodic) of OHP Conferences proceedings
e. Report (periodic) of status of pending and completed OHP designated actions
f. Report (periodic) of Agency medical quality assurance program.
g. Report (periodic) of statistical information from each Center's evaluation

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

B. LINE ITEM TITLE: Plan, Quality Management System					A. ITEM NO. 016
C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
YA-B	3	6	RT	See Block J	See Block J

J. REMARKS:

The Contractor shall submit its Quality Management System plan in summary form with its proposal. The plan shall be completed within 60 days after contract award and maintained throughout the life of the contract.

K. DISTRIBUTION

YA-A (1A)
YA-B (1A)
TA-C1 (1A)
QA (1A)

TOTALS NO.	TOTALS TYPE
4	A

DATA REQUIREMENT DESCRIPTION

1. TITLE Plan, Quality Management System

2. NUMBER

3. USE

To define the Contractor's Quality Management System programs. It addresses activities preformed within this contract and in compliance with the NASA and KSC Quality Assurance programs and ISO 9000.

4. DATE

5. ORGANIZATION
QA

6. REFERENCES
ISO 9000
KHB 5310.1

7. INTERRELATIONSHIP
DRD 002 & 027

8. PREPARATION INFORMATION

1. The Quality Management Plan shall serve as the Master planning and control document. The plan shall describe the contractor's approach describing "what" will be done and method of management of each task in terms of when, by which organization, and be in a format that identifies contractual requirements.
2. The plan shall show the relationship of individuals managing Mission Elements. All elements of mission performance shall be addressed as defined in ISO 9000, Quality Management Standard.
3. The Quality Management Plan shall contain the Contractor's methodology of executing his program requirements, approach, and criteria, leaving the implementation verbiage to the procedures.
4. As an attachment to the Quality Management Plan, the contractor shall list his implementing procedures by subject.
5. The Quality plan shall meet the intent of KHB 5310.1 and ISO 9000.

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL	A. ITEM NO. 017

B. LINE ITEM TITLE:
Maps and Databases, Ecological Systems

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
TA-C	5	2	AR See J	See J	See J

J. REMARKS:

F. Databases will be continuously maintained and updated as needed to ensure utility for resource management
G. On request
H. On request

K. DISTRIBUTION
TA-C (1A)

TOTALS NO.	TYPE
1	A

DATA REQUIREMENT DESCRIPTION

1. TITLE Maps and Databases, Ecological Systems

2. NUMBER

3. USE
Provide Digital maps and databases for natural resource management at KSC

4. DATE

5. ORGANIZATION
TA-C

INTERRELATIONSHIP
DRD 006

6. REFERENCES

8. PREPARATION INFORMATION

These Maps and databases for ecological systems are called the Geographic Information System (GIS).

The GIS databases will include the following data sets as defined in DRD-006

1. Terrestrial land cover
2. Soils
3. Surface Waters
4. Submerged vegetation
5. Fire management units
6. Mosquito impoundments
7. Submerged Aquatic Vegetation
8. Watersheds
9. Threatened and endangered species habitat
10. Others as requested

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

A. ITEM NO.	B. LINE ITEM TITLE:
018	Reports, Annual Summary of Animal Use

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
YA-D3	1	2	See Block 8	See Block 8	

J. REMARKS:

These reports are to be submitted as required to summarize the use of animals in all KSC research activities.

K. DISTRIBUTION

YA-A (1A)
YA-D3 (3A)
UB (1A)

TOTALS NO.	TOTALS TYPE
5	A

DATA REQUIREMENT DESCRIPTION

Reports, Annual Summary of Animal Use

2. NUMBER

3. USE

Prepared to present animal use data for all KSC animal research activity.

4. DATE

5. ORGANIZATION

KSC/YA

7. INTERRELATIONSHIP

NONE

6. REFERENCES

8. PREPARATION INFORMATION

Reports are required for the following purposes and organizations:

1. An annual report to the U.S. Department of Agriculture summarizing KSC animal research use by species of animal, number and final disposition. Contractor report is due by November 1st of each year through YA/AA.
2. An annual report to AAALAC International that summarizes facility changes, personnel qualifications and animal use by type and number. Contractor report due by October 15th each year through YA/AA.
3. An annual report is due to the Office of Laboratory Animal Welfare (OLAW / NIH/ PHS) each year summarizing in detail the LSC animal research program, facility and personnel in detail.
4. A report is due to AAALAC International every third year summarizing in detail the Animal Research Program at KSC including all aspects of the program, research activities and husbandry. It is submitted in advance of the tri-annual accreditation visit.

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL	A. ITEM NO. 019

B. LINE ITEM TITLE:
Plan, Information Technology (IT) Security

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB. see Section J below	H. AS OF DATE
YA-A	1	2	AN		

J. REMARKS:

Within 30 calendar days after contract award the Contractor shall submitted a draft IT Security Plan. The NASA IT Security Manager prior to acceptance will review the initial submittal, and the Contractor is required to incorporate review comments as applicable. The plan shall be updated every 12 months to cover all changes necessary.

K. DISTRIBUTION

YA-A (3A)	QA-D (1A)
TA-C2 (1A)	OP-OS (1A)
YA-E5 (1A)	TA-1 (1A)
YA-D3 (1A)	

TOTALS NO.	TYPE
9	A

DATA REQUIREMENT DESCRIPTION

1. TITLE
Plan, Information Technology (IT) Security

2. NUMBER

3. USE
To ensure KSC and NASA IT Security Policies are implemented.

4. DATE

5. ORGANIZATION
KSC/TA-1

7. INTERRELATIONSHIP

6. REFERENCES
See Below

8. PREPARATION INFORMATION

The IT Security Plan shall address the Contractor approach to implementing the following KSC and NASA policies and directives on IT Security:

KSC 52.239-90 KSC Information Technology (IT) Security Program (AUG 1999)
NPD 2810.1 Security of Information Technology
NPG 2810 Security of Information Technology
KDP-KSC-P-1836 Removing Data and Licensed Software from Information Technology Storage Devices
NFS 1852.204-76 Security Requirements for Unclassified Information Technology Resources (JUL 2001)

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

B. LINE ITEM TITLE: Report, Equal Employment Opportunity					A. ITEM NO. 020
C. OPR. AJ	D. TYPE 3	E. INSPECT/ ACCEPT 2	F. FREQ. QU	G. INITIAL SUB. See Section J	H. AS OF DATE See Section J

J. REMARKS:

The Contractor shall provide this report no later than 7 calendar days after the close of each reporting period which end March 31st, June 30th, September 30th, and December 31st.

K. DISTRIBUTION

AJ (1A)
OP-OS (1A)

TOTALS NO.	TYPE
2	

DATA REQUIREMENT DESCRIPTION

1. TITLE: Report, Equal Employment Opportunity

2. NUMBER: 023

3. USE: This document will be used by the Government to assess the Contractor's equal employment and affirmative action management of the contract effort.

4. DATE:

5. ORGANIZATION: KSC

6. REFERENCES:

7. INTERRELATIONSHIP:

8. PREPARATION INFORMATION

A. Format and content of the report shall be in accordance with KSC Forms 32-58 C/G 1/91, Quarterly Equal Opportunity Statistical Report, and a narrative for equal employment activities containing, as a minimum, the following: Contract number, Community Activities, Recruitment Activities, Special Events, Other pertinent information.
B. Reports shall be provided no later than seven calendar days after the end of a calendar quarter as defined in Section J above.
C. The Contractor may reproduce the forms, or obtain an electronic version from the NASA EO Office.

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

A. ITEM NO. 021

B. LINE ITEM TITLE:
Plan, Motor Vehicle Utilization

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
YA-A	1	2	SA / AD	see Section J below	

J. REMARKS:

The initial plan shall be submitted no later than 30 calendar days after contract award. The NASA Transportation Officer will review the submittal prior to acceptance. The plan shall be updated every six months to cover all changes necessary including continuous justification for use of vehicles and a 24 month forecast for motor vehicle requirements.

K. DISTRIBUTION

YA-A (1A)
OP-OS (1A)
GG-C-B1 (1A)
TA (1A)

TOTALS NO.	TYPE
4	A

DATA REQUIREMENT DESCRIPTION

1. TITLE
Plan, Motor Vehicle Utilization

2. NUMBER
024

3. USE
To ensure management of motor vehicles needed to properly perform the requirements of the contract.

4. DATE

5. ORGANIZATION
KSC/TA

7. INTERRELATIONSHIP

6. REFERENCES
See Below

8. PREPARATION INFORMATION

The Motor Vehicle Utilization Plan shall fully describe the management techniques which assure that the proper number of vehicles are continuously justified, that operators are fully aware of "official use only" restrictions, and are properly licensed. The plan shall provide evidence that the Contractor maintains motor vehicle insurance covering bodily injury and property damage, with limits of liability as required by NFS 1852.228-75, Minimum Insurance Coverage. The plan shall detail the periodic checks (by the Contractor, GSA or other Vehicle Provider, and NASA) to ensure that the vehicles are being used exclusively for this contract. Operator discipline for improper use of vehicles shall be described. The plan shall also address operator requirements, processes for obtaining preventative maintenance, processes for accident reporting, and list the type / quantity of vehicles approved by the NASA Transportation Office for use on the contract.

The Contractor shall provide a copy of this plan to all its employees that may use the vehicles and provide continuous awareness of its requirements to its personnel through e-mail, company newsletter announcements, safety meetings, etc.

Block 6 reference:
KHB 6000.1 C
KHB 1610.1

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL	A. ITEM NO. 022

B. LINE ITEM TITLE:
Report, KSC Headcount

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
YA-A	3	6	QU	See Section J	See Section J

J. REMARKS:

The Contractor shall provide this report no later than 5 calendar days after the close of each reporting period which end March 31st, June 30th, September 30th, and December 31st.

K. DISTRIBUTION

YA-A (1A) BA-A (1A)
OP-OS (1A) BA-D(1A)
QA-A (1A)

TOTALS NO.	TYPE
5	A

DATA REQUIREMENT DESCRIPTION

1. TITLE
Report, KSC Headcount

2. NUMBER

3. USE
Information for workforce reporting requirements

4. DATE

5. ORGANIZATION
KSC

7. INTERRELATIONSHIP DRD 001

6. REFERENCES

8. PREPARATION INFORMATION

A. Labor Reports shall be submitted quarterly, not later than the 10th calendar day after close of reporting period (see Section J).
B. The report shall include: the contract number, the contractor's total on-site workforce, total on-site non-union represented employees, and total off-site workforce performing on the contract.
C. A complete organizational chart including all employees by skill or job classification shall be provided.
D. The report shall also separately identify the same information for all subcontractors with on-site personnel.

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

A. ITEM NO. 023

B. LINE ITEM TITLE: Report, Monthly Purchase Order

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
YA-A	1	2	MO	see Section J below	

J. REMARKS:

Initial submittal of this report is no later than 10 calendar days after the first month of contract performance with monthly updates thereafter.

Submit report in electronic media

K. DISTRIBUTION

YA-A (1D)
OP-OS (1D)
OP-CIAO (1D)

TOTALS NO.	TYPE
3	D

DATA REQUIREMENT DESCRIPTION

1. TITLE: Report, Monthly Purchase Order

2. NUMBER: 026

3. USE

) report the Contractor's procurement activity.

4. DATE

5. ORGANIZATION: KSC

7. INTERRELATIONSHIP

6. REFERENCES

8. PREPARATION INFORMATION

The Monthly Purchase Order Reports shall address the following information:

1. A list of procurement activity at the mission plan element level during the month with vendor name, purchase order number, purchase order amount, order date, and a total monthly amount.

2. The report shall include a summary depicting the total dollar amount and percentage of total procurements placed with large, small, small disadvantaged, woman-owned, and hub-zone businesses. The summary shall be shown for the current month and contract year cumulative amount with totals.

FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

B. LINE ITEM TITLE:	A. ITEM NO.
Plan, Facility and Laboratory Utilization	DRD 024

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
YA-A, YA-D3, UB-E	3	1	See J	See J	See J

J. REMARKS:

1. Prepare monthly update of laboratory assignments and projections for current and next FY. (Provide First Submit February 1, 2002)

2. Prepare semi-annual facility utilization projections for subsequent three years. (Provide First Submit April 1, 2002)

K. DISTRIBUTION

YA-A (1A)
YA-D3 (2A)
UB-E (2A)
TA-C (2A)

TOTALS	
NO.	TYPE
7	A

DATA REQUIREMENT DESCRIPTION

1. TITLE	2. NUMBER
Plan, Facility and Laboratory Utilization	
3. USE	4. DATE
To provide facility and laboratory utilization information to NASA.	
	5. ORGANIZATION
	KSC/ TA, YA, & UB
7. INTERRELATIONSHIP	6. REFERENCES
DRD 002	

8. PREPARATION INFORMATION

A. Monthly update will annotate specific laboratory assignments for each experiment/activity assigned for operation in any Life Sciences-controlled lab or facility.

B. Semi-annual facility utilization will annotate "category-level" requirement expectations for long-range planning. Categories include, flight experiment processing, flight experiment development, intramural research, extramural research, major modification/refurbishment, etc.

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

A. ITEM NO. 025

B. LINE ITEM TITLE: Plan, Cost Phasing

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
YA-A	3	6	AN	March 20, 2002	

J. REMARKS:

K. DISTRIBUTION

YA-A (1A) OP-OS (1A)
QA-D (1A)
YA-D3 (1A)
UB-E (1A)
TA-C (1A)

TOTALS NO.	TYPE

DATA REQUIREMENT DESCRIPTION

1. TITLE: Plan, Cost Phasing Plan

2. NUMBER

3. USE: To prepare develop Program Operating Plan for the Center and annual contract budget plans

4. DATE

5. ORGANIZATION

INTERRELATIONSHIP

6. REFERENCES

8. PREPARATION INFORMATION

Prepare and submit an initial cost phasing plan by March 20 for the known work within the 14 Elements of the Mission Plan to begin October 1and end September of the following year

1. Base plan on anticipated actual personnel labor costs, non-labor costs, G&A, and fee. Submittal should reflect applicable work described in the Mission Plan for the FY, in conjunction with the Statement of Work.

Prepare and submit a final cost phasing plan for the 14 Elements of the Mission Plan by September 15 for the fiscal year beginning October 1 based on the budget marks received from the Government by August 1.

2. Prepare impact statements for any work identified in the Mission Plan not covered by the budget marks.

Prepare and submit a updated cost phasing plan for the 14 Elements of the Mission Plan by March 30 for the remaining period of the fiscal year that began the previous October 1.

3. Prepare impact statements for any work identified in the Mission Plan not covered by the budget marks.

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

B. LINE ITEM TITLE:	A. ITEM NO.
Plan, Emergency Preparedness	DRD 026

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
YA-A, TA-E2	1	2	RT	See J	See J

J. REMARKS:

The Emergency Preparedness Plan shall be submitted for approval by the Contracting Officer within 60 days after contract start.

K. DISTRIBUTION

YA-A (1A)
TA-E2 (1A)

TOTALS	
NO.	TYPE
2	A

DATA REQUIREMENT DESCRIPTION

1. TITLE

Emergency Preparedness Plan

2. NUMBER

3. USE

To provide a plan for emergency readiness.

4. DATE

5. ORGANIZATION

KSC/ TA, YA,

7. INTERRELATIONSHIP

DRD 010

6. REFERENCES

See Block 8

8. PREPARATION INFORMATION

Prepare and maintain a current Emergency Preparedness Plan for the protection of personnel and facilities in assigned areas of operation.

A. The plan shall provide:
   a. Emergency plans and procedures (including Hurricanes);
   b. Method to be used for indoctrination and training of Contractor and support personnel for optimum emergency readiness.
   c. Procedures for prompt return of systems to full operational conditions following an emergency
   d. Effective emergency operational performance
   e. Description of how the Plan will be implemented
   f. Identification of a Hurricane Coordinator.

A. The format of the plan shall be similar to that in JHB 2000 "Consolidated Comprehensive Emergency Management Plan (CCEMP)"

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

B. LINE ITEM TITLE:	A. ITEM NO.
Plan, Internal Surveillance	DRD 027

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
YA-A,	1	2	RT	See J	See J

J. REMARKS:

The Contractor shall submit its Internal surveillance plan in summary form with its proposal. The plan shall be completed within 60 days after contract award and maintained throughout the life of the contract.

K. DISTRIBUTION

YA-A (1A)
OP-OS (1A)

TOTALS	
NO.	TYPE
2	A

DATA REQUIREMENT DESCRIPTION

1. TITLE	2. NUMBER
Internal Surveillance Plan	
3. USE	4. DATE
To provide contractor self-assessment plan.	
	5. ORGANIZATION
	KSC YA,
INTERRELATIONSHIP	6. REFERENCES
DRD 002, 010, 013, 016, & 028	

8. PREPARATION INFORMATION

Prepare and maintain a current Internal Surveillance plan for self-assessment of performance of the Life Sciences mission plan.

The plan shall provide for:

a. An evaluation of cost, schedule, and technical performance of each element of the mission plan
b. Evaluations of cost, schedule, and technical performance of the overall mission plan.
c. An evaluation of Risk Mitigation activities that are in progress or being planned.
d. The integration of Safety and Health, Risk Management, Reliability and Maintainability, and Quality Management into the Mission Plan.

The format of the plan shall be left to the contractor.

KSC FORM 16-246 (REV. 1/82)

DATA REQUIREMENT

CONTRACT APPLICATION INFORMATION FOR DRL

B. LINE ITEM TITLE:	A. ITEM NO.
Plan, Risk Management	DRD 028

C. OPR.	D. TYPE	E. INSPECT/ ACCEPT	F. FREQ.	G. INITIAL SUB.	H. AS OF DATE
YA-A, TA-E2	1	3	RT	See J	See J

J. REMARKS:

The Contractor shall submit its Risk Management plan in summary form with its proposal. The plan shall be completed within 60 days after contract award and maintained throughout the life of the contract.

K. DISTRIBUTION

YA-A (1A), OP-OS (1A)

TOTALS	
NO.	TYPE
2	A

DATA REQUIREMENT DESCRIPTION

1. TITLE	2. NUMBER
Risk Management Plan	
3. USE	**4. DATE**
To provide status of ongoing issues and to identify and mitigate the impending risk.	
7. INTERRELATIONSHIP	**5. ORGANIZATION**
DRD 002 & 027	KSC/ YA
	6. REFERENCES
	NPG 8715.3

8. PREPARATION INFORMATION

Prepare and maintain a current Risk Management Plan for the identification and elimination of performance issues.

The plan shall provide:

a. Risk identification processes and procedures,
b. Method to be used to train the Contractor and support personnel in risk identification and mitigation,
c. Procedures to progress from risk identification through risk mitigation,
d. Methods to measure the success of a risk mitigation,
e. How Contractor will provide status to NASA of on-going risk mitigation efforts.

The format of the plan shall be based on the format on the following pages.

KSC FORM 16-246 (REV. 1/82)

1. INTRODUCTION

1.1 OBJECTIVES

Two general objectives can be discussed: (1) satisfy the requirements of NPG 7120.5A, NASA Program and Project Management Processes and Requirements, as tailored for this mission, and (2) describe the expectations for the selected Risk Management (RM) practices in terms of mission usage; e.g., to better understand the mission success sensitivity to mission features, to scope the adequacy of the budget reserve, etc.

1.2 MISSION SUCCESS CRITERIA

Summarize or refer elsewhere in the Mission Plan to the prioritized, specified success criteria. If necessary or desirable, describe how these can be compared as a metric for assessing a risk impact to the mission.

1.3 MISSION RISK DRIVERS

Identify any extraordinary risk features of the mission. Use other similar or contemporary missions as "norms" to identify the extreme features that might drive risk. For example, your program has a large dependence on the successful demonstration of a technology and the uncertainty is larger than the capacity of the schedule to absorb iterative development efforts, a critical path item has a large cost uncertainty, etc.

1.4 RISK STRATEGY

Based on the risk drivers, the relative priorities of cost control, performance, and perceived technical margins, a risk strategy should be defined that focuses on the achievement of highest priority objectives. This can be discussed as where the balance point is in the balance of risks. A risk adverse position has the balance point on the technical side. A risk acceptance position allows some reduction in performance while maintaining control of mission resources. A risk-taking position can allow deeper potential performance losses while allowing the possibility of much larger gains and still managing to an identified budget algorithm.

2. IMPLEMENTATION

2.1 RESPONSIBILITIES

Identify who performs the Risk Management functions by name and/or position. Identify the expectations of the Mission Team.

2.2 SCHEDULES AND MILESTONES

Refer to top-level schedules if Risk Management milestones are called out or provide consistent Risk Management milestones with referenced mission schedules. Included should be reviews, assessment milestones, decision points, etc.

2.3 RESOURCES, TOOLS, AND FACILITY REQUIREMENTS

What work breakdown structure (WBS) elements fund Risk Management activities? What Risk Management tools are being used? What resources in or outside the mission are being provided?

3. PROCESS DESCRIPTION

3.1 PROCESS FLOW CHART

Describe the overall flow of Risk Management activities. Illustrate in diagram format the flow of activities in the Risk Management elements and between elements. Consult with the S&MA Mission Assessment Office for sample plans and flow charts as necessary.

Also, describe the unique flow of data types and categories of risk, especially if driven by a tool being used.

3.2 RISK IDENTIFICATION AND ASSESSMENT

3.2.1 METHODS OF IDENTIFICATION AND CATEGORIZATION

What categories of risk are being book-kept? Are you assessing both implementation and mission risk aspects of risk items? What subsets/types of risk are to be aggregated? What checklists/processes are considered for identifying risks?

3.2.2 MEASURES FOR DETERMINING LIKELIHOOD AND IMPACT

Describe the measurement scales for measuring likelihood and impact (qualitative or quantitative, continuous or discrete). Identify the criteria for assigning these measures.

3.2.3 AGGREGATING/RANKING CRITERIA AND METHODS

How are total mission risks to be calculated and described? This should follow from the scales used and the objectives previously described. Describe the aggregation approaches and the Risk Management tool capabilities to be used. Show sample formats.

3.2.4 OTHER DEFINING IDENTIFICATION/ASSESSMENT DATA

What other data are required to be identified by the risk identifiers? How will the data be used in deciding mitigation actions?

3.3 RISK DECISIONMAKING

3.3.1 METHODS AND FORUMS

Describe how the Risk Management team will be utilized in the process. Will change boards or other similar forums be used to make risk decisions? How will the tools be used to create decision data? How will resource plans be linked to risk management (e.g., risk cost will be compared to budget reserves, schedule risk will be assessed against schedule uncertainties, etc.)?

3.3.2 MISSION MITIGATION AREAS AVAILABLE

Identify the kinds of mitigation options that may be available - significant scope flexibility, including agreed-to mission object descopes, alternative technologies in development, multiple sources for equipment, schedule flexibility, etc.

3.4 RISK TRACKING

3.4.1 PLANNED UTILIZATION OF TRACKING METRICS

Describe the sources of metrics available to track risks. How will the mission produce TPM's? What programmatic (cost, schedule risk) metrics will be available and how will they be produced?

3.4.2 RISK STATUS REPORTS

What reports are planned, to whom, and with what frequency? If partners are included in the mission management structure, what reports have they agreed to?

4. KPPMC AGREEMENTS

4.1 INCLUDE/POINT TO COMPLIANCE MATRIX FOR NPG 7120.5A FOR RISK MANAGEMENT COMPLIANCE

Discuss tailored areas (where compliance waivers are being requested).

4.2 IDENTIFY AGREED-TO LIST OF RISK MANAGEMENT REVIEW METRICS AND REPORTS

How are risks going to be reported to and statused with the KPPMC?

5. RISK MANAGEMENT USAGE IN MISSION MANAGEMENT

5.1 CONSIDERATION OF RISK IN DAY-TO-DAY MISSION MANAGEMENT

Describe how the mission manager intends to use the Risk Management data and process. Is it the single database for mission decisions? Is it integrated with other data (top 10 problem list, fever charts)? Are there related and integrated risk assessment processes like schedule and budget uncertainty assessments, technical assessments like failure, mode, and effects analysis (FMECA), etc., which will provide data for the decision?

5.2 PARTNER AND CONTRACTOR CONTRIBUTIONS TO MISSION RISK MANAGEMENT

Discuss sharing of the databases, combined or separate risk lists, common or separate criteria, etc.

5.3 RISK MANAGEMENT IN MISSION REVIEWS

Discuss how risk will be treated and statused in formal reviews.

Statement of Work
Appendix 2

LIST OF CERTIFICATIONS

Gives the certifications or accreditations required for the listed laboratories. Gives certifications and licensures required for discipline sensitive personnel.

CERTIFICATIONS AND ACCREDITATIONS

N = NASA/KSC Held
C = LSSC Held

N 1. Biomedical Clinical Laboratory
Licensed by State of Florida
Department of Health & Rehabilitative Services
Specialities: Bacteriology, Parasitology, Mycology
Serology, Clinical Chemistry,
Hematology

C 2. Biomedical Clinical Research Laboratory
Certificate - in vitro Testing with Radioactive Material
Under general License - State of Florida Dept HRS

N 3. Department of Health & Human Services
Health Care Financing Administration
Clinical Laboratory Improvement Amendments of 1988
Laboratory Registration Certificate

C 4. Biomedical Clinical Laboratory
College of American Pathologists
Specialities: Chemistry, Hematology, Serology
Microbiology

C 5. Environmental Microbiology Laboratory
Certified to perform analysis on drinking water
By: State of Florida - Dept HRS
Categories: Microbiology

C 6. Environmental Microbiology Laboratory
Environmental Water Testing Laboratory
Certified to perform analysis on environmental waters
By: State of Florida - Dept HRS
Categories: Microbiology

C 7. Environmental Chemistry Laboratory
Meet standards for environmental waters
By: State of Florida - Dept HRS
Categories: Nutrients, General Category I,
General Category II

C 8. Environmental Chemistry Laboratory
Meet standards for safe drinking water testing
By: State of Florida - Dept HRS
Categories: Inorganic Primary and Inorganic Secondary

N 9. Life Sciences Support Facility (Hangar L)
Certificate of Accreditation
By: American Association for Accreditation of
Laboratory Animal Care (AAALAC) International

C 10. U.S. Department of Justice
Drug Enforcement Administration
Category: Controlled Substances Registration Certificate

C 11. South Carolina Depart of Health & Environmental Control
Category: Radioactive Waste Transport Permit

LICENSURES AND CERTIFICATIONS

1. Physicians

Personnel shall possess a doctorate of medicine ((M.D.) or doctorate of osteopathy (D.O.) (or equivalent) and be properly licensed and certified to perform the work required.

Personnel shall be certified in Basic Cardiac Life Support (BCLS) and Advanced Cardiac Life Support (ACLS).

At least one physician for the support office of the NASA Principal Center for Occupational Health shall be board certified by the American Board of Preventive Medicine in Occupational Medicine.

2. Nursing

Personnel shall possess a bachelor of sciences in nursing (BSN) and shall be licensed to practice nursing in the state of Florida.

Personnel shall be certified in BCLS and ACLS, and as BCLS instructor. (Not required for nursing support to the principal center for occupational health)

Personnel shall be trained in flight nursing techniques. (Not required for nursing support to the principal center for occupational health)

3. Laboratory Pathologist

Personnel shall be a physician, certified or eligible to be certified, by the American Board of Clinical Pathology and licensed by the State of Florida.

4. Laboratory Technology

Personnel shall possess a bachelor of science in an appropriate discipline and shall be certified as a technologist by the State of Florida and by the specialty organizations, as required to be acceptable by the College of American Pathologists and to maintain designated laboratory certifications and/or accreditations of their discipline.

These requirements are applicable to clinical microbiology, chemistry, hematology, immunology, urology, and blood banking.

5. Veterinary

Personnel shall possess a doctorate in veterinary medicine (D.V.M.) and shall be certified by, or a Diplomat of, the American College of Laboratory Animal Medicine and the American Veterinarian Medical Association.

6. Laboratory Animal Technology

Personnel shall possess one of the following:

A four-year degree in a Life Science, plus two years experience in a laboratory animal facility plus an AALAS Laboratory Animal Technologist certification.

A two-year degree in laboratory animal science or veterinary technology plus four years experience in a laboratory animal facility plus AALAS Laboratory Animal Technologist certification.

7. Payload Handling and Development

Personnel working on or with payload flight hardware/critical GSE will be properly certified/trained. These certifications/training courses are available at KSC, and include, but are not limited to: soldering, torque and tubing, electrical connectors mate and demate, forklift and pallet stacking, valid State of Florida Class 4 (CDL) drivers license.

8. Fitness Center and Musuloskeletal Rehabilitation Personnel

Personnel shall be certified in Basic Life Support (BLS).

Fitness Center Supervisors shall possess American College of Sports Medicine Health/Fitness Instructor Certification.

All other Fitness Center personnel shall possess at least one of the following Certifications (diversity is encouraged):

a. ACSM (American College of Sports Medicine)
   Health Fitness Instructor

b. NATA (National Athletic Trainers Association)
   Certified Athletic Trainer

c. NSCA (National Strength and Conditioning Association)
   Certified Strength and Conditioning Specialist

d. AFAA (Aerobic and Fitness Association of America)
   Aerobic Instructor Certification - "Primary Certification"

e. ACE (American Council on Exercise)
   Personal Training Certification
   Group Fitness Instructor Certification
   Lifestyle and weight Management Consultant Certification
   Clinical Exercise Specialist Certification

f. ISSA (International Sports Sciences Association)
Certified Fitness Trainer
Aerobic Fitness Trainer
Fitness Therapist

Musuloskeletal rehabilitation personnel must be certified by the National Athletic Trainers' Association Board of Certification (NATABOC). They must also, within 90 days, be licensed by the State of Florida Department of Health per Chapter 468 Part XIII Athletic Trainers.

9. Other Certifications

When an activity requires a case specific certification, such as medical clearance and physiological altitude chamber training for flying aboard the KC-135 aircraft or medical clearance for SCAPE operations personnel involved shall possess appropriate certifications.

NOTE: These licensures and certifications shall be maintained continuously active.

Statement of Work
APPENDIX 3

DOCUMENT LIST

Provides a comprehensive, though not necessarily inclusive, list of regulatory, advisory, and pertinent documents essential and/or useful to performing this contract

APPLICABLE DOCUMENTS

KENNEDY MANAGEMENT INSTRUCTIONS (KMI)

1150.24A	Boards, Committees, Working Groups and Panels
1420.1F	KSC Forms Management Program
1440.1H	Records Management and Vital Records Program
1800.1D	KSC Environmental Health Program
1810.1I	KSC Occupational Medicine Program
1860.1E	KSC Radiation Protection Program
2240.1G	KSC Library and Archives
8800.8B	KSC Environmental Management

APPLICABLE DOCUMENTS

KENNEDY HANDBOOKS (KHB)

JHB 2000	Consolidated Comprehensive Emergency Management Plan (CCEMP)
1200.1D	Facilities and Real Property Management Handbook
1610.1C	KSC Security Handbook
1700.7C	Space Shuttle Payload Ground Safety Handbook
1710.2D	KSC Safety Practices Handbook
1840.1D	KSC Industrial Hygiene Handbook
1860.1C	KSC Ionizing Radiation Protection Program
1860.2C	KSC Nonionizing Radiation Protection Program
1870.1D	KSC Sanitation Handbook
4000.1E	Supply and Equipment System Manual
5310.1D	Reliability, Maintainability & Quality Assurance Handbook
5330.9B	Metrology and Calibration Handbook
8800.6D	KSC Environmental Control Handbook
8800.7D	Waste Management Handbook

APPLICABLE DOCUMENTS

NASA Policy Directives (NPD) and NASA Policy Guides (NPG)

1440.6E	(NPD) NASA Records Management
1441.1C	(NPG) NASA Records Retention Schedules (NRRS)
1800.2	(NPD) NASA Occupational Health Program
1810.2A	(NPD) NASA Occupational Medicine Program
1820/1A	(NPD) NASA Environmental Health Program
1830.1A	(NPD) NASA Employee Assistance Program
1840.1A	(NPD) NASA Workers' Compensation Program
2810.1	(NPD) Security of Information Technology
2810	(NPG) Security of Information Technology
3792.1A	(NPG) NASA Plan for a Drug-Free Workplace
4200.1E	(NPG) NASA Equipment Management Manual
4200.2B	(NPG) Equipment Management Manual for Property Custodians
4310.1D	(NPG) Identification and Disposition of NASA Artifacts
5100.4B	(NPG) Federal Acquisition Regulation Supplement (NASA/FAR Supplement)
7100.8	(NPD) Protection of Human Research Subjects
7120.4B	(NPD) Program / Project Management
7120.5	(NPG) NASA Program and Project Management Processes and Requirements
8621.1	(NPD) NASA Mishap Reporting & Investigating Policy
8621.1G	(NPG) NASA Procedures and Guidelines for Mishaps Reporting, Investigating, and Record Keeping
8700.1	(NPD) NASA Policy for Safety and Mission Success
8710.2B	(NPD) NASA Safety and Health Program
8715.1	(NPG) NASA Safety and Health Handbook Occupational Safety and Health Program
8715.2	(NPG) NASA Emergency Preparedness Procedures and Guldelines

8715.3	(NPG) NASA Safety Manual
8720.1	(NPD) NASA Reliability and Maintainability (R&M) Program Policy
8730.3	(NPD) NASA Quality Management Systems Policy (ISO 9000)
8830.1	(NPG) NASA Affirmative Procurement Plan for Environmentally Preferable Products
8910.1	(NPG) Care and Use of Animals
9501.1G	NASA Contractor Financial Management Reporting System
9501.2C	(NPG) NASA Contractor Financial Management Reporting

REFERENCE DOCUMENTS
KENNEDY MANAGEMENT INSTRUCTIONS (KMI)

1216.1E	Smoke-Free Workplace
1301.3C	Media Access
1490.2G	Printing, Duplicating, Microimaging & Officer Copier Services
1530.1E	KSC Mail Management Program and Locator Directory
1590.2I	KSC Bulletin, Bulletin Boards, and Hallway Displays
1710.18A	KSC Safety Assurance Policy
1800.2D	KSC Hazard Communication Program
3792.1H	KSC Employee Assistance Program
6540.1K	Use of Mission Management Aircraft Assigned to KSC

REFERENCE DOCUMENTS
KENNEDY HANDBOOKS (KHB)

1610.1C	KSC Security Handbook
1820.3B	KSC Hearing Conservation Program
1820.4C	KSC Respiratory Protection Program
2540.1F	KSC Telecommunications Services

3410.1G	Implementing Instructions for KSC Systems, Safety and Skills Training,
	and for Certification of Personnel
3451.1H	KSC Awards and Recognition Program Handbook
6600.1E	KSC Transportation Support System Handbook

Other Applicable Documents

KDP-KSC-M-1000 Rev G	Kennedy Space Center Business System Manual
KDP-KSC-P-1836	Removing Data and Licensed Software from Information Technology Storage Devices
KDP-KSC-P-1735	Personnel Protective Equipment Testing
KDP-KSC-P-1899	Obtaining Graphic Services
KDP-KSC-P-2557	Helicopter Medical Equipment Issue

JSC 13956 Rev G	Medical Operations Requirements Document for Space Shuttle
SSP 50260 Rev A	International Space Station Medical Operations Requirements Document
MIL STD 1472F	Human Engineering
NSTA 5300.4 (1D-2)	Safety, Reliability, Maintainability and Quality Provisions for the Space Shuttle Program
KBM-PL-1.2E	Emergency Medical Services Plan
KBM-PL-1.1C	Medical Operations Support Implementation Plan
	Ecological Program Plan for the John F. Kennedy Space Center dated 1995
	Section 508 of the Rehabilitation Act
	Electronic and Information Technology Accessibility Standards

Statement of Work
APPENDIX 4

EQUIPMENT INVENTORY

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
0011310	BALANCE	PM1200	H54119	2466	19890321	49635	PAMSB
0011365	RECEIVER, LORAN-C	612B	57166	1427	19890724	49635	1111
0011704	METER,PH,PORT	190000-00	3520	350	19900307	49635	1158
1517374	DISK STORAGE UNIT	611	641G1152	1156	19961111	M7355	3227A
1517375	DISK STORAGE UNIT	611	641G1136	1156	19961111	M7355	3227A
1517376	DISK STORAGE UNIT	611	641G1130	1156	19961111	M7355	3227A
0104711	AUTO SAMPLER	ALS2016	89079004	8114	19890419	49635	1182
1515598	COMPUTER, DIGITAL	544	633F0F83	14771	19960827	M7355	3227
0104907	PUMP, VACUUM	E2M2	26257	5980	19890522	49635	1151
0104951	DISH-FILLING MACHINE, POURMATI	MP-320	980414365	9750	19890522	49635	1158
0161182	RECEIVER, LORAN	PAL	0493	525	19870206	49635	1143
1516128	COMPUTER, DIGITAL	29Z	23HZ873	20500	19960917	49635	1135
0161707	LENS, CAMERA, MICRO, 55MM	NONE	L217543	310	19870331	49635	1142
0161708	LENS, CAMERA, ZOOM, 70-210MM	NONE	L209305	210	19870331	49635	1142
1516129	DISPLAY UNIT, COLOR	VCDTS213782M	EX02700180	1000	19960917	49635	1135
1505462	BOARD DRAWING	34367HW	4DB2460057	3579	19960628	M7355	3227
0162426	COUNTER, LASER BACTERIA COLONY	500A	500A224	12000	19870707	49635	1158
0162427	DATA PROCESSOR, CASBA	800	8070	3995	19870707	49635	1158
0162572	PLATER, SPIRAL	CU	983	9495	19870713	49635	1158
1516167	CALIBRATOR, MULTIGAS	146	56247309	7101	19960923	49635	1123
1375913	CAMERA, BURROW, TORTOISE	FDM402A	9036269	1200	19940819	M7355	3106
1980541	COMPUTER, DIGITAL	MTI	1077076002	68300	19991212	M7355	3227A
1391140	ENGINE, OUTBOARD	50 HORSE, 4 STROKE	QG301106	5100	19950607	49635	OUTSD
0163695	TABLE, VIEWING	GFL 918LW	03870092	2960	19870924	M7355	3227A
0164212	STERILIZER, ELECTRIC STEAM	M/C3522	671191	25196	19870928	49635	1174
0164213	ANALYZER, TOTAL ORGANIC CARBON	DC 180	Page 129	12450	19870711	66232	
0164224	SAMPLER, CRITICAL FLOW	NONE	0740870191D	2575	19870828	L71557	PAMSA
0164225	SAMPLER, CRITICAL FLOW	NONE	0740870190C	2575	19870828	L71557	PAMSA
0165686	MAINFRAME, RACK MOUNTABLE	100081	1437	6580	19880120	L71557	PAMSA
1374121	ANALYZER, CARBON DIOXIDE	LI6262	IRG3-455	8835	19940302	49635	PAMSB
0239239	METER, WATER CURRENT	6665	368	1595	19851107	49635	1143
0239240	STERILIZER, AUTOMATIC	AS-3	582582	3550	19851107	49635	1158
0240109	BRIDGE, CONDUCTIVITY	31	5567	773	19871216	49635	1150
0240113	FUME HOOD, PERCHLORIC	93-480	NONE	4179	19860610	49635	1151
0240206	FUME HOOD, PERCHLORIC	93-480	NONE	5735	19851025	49635	1151
1120803	SCOPE, ZOOM TRANSFER	ZT4-H	B11400PM	6800	19911029	M7355	3227
1376247	METER, DIGITAL, FLOW	4700	NONE	535	19940914	49635	1182
1977382	DISK DRIVE UNIT	DS60S2MM	98110A0719	2050	19980722	M7355	3227

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
0251536	CABINET, FLOW, LAMINAR	EG6252	E27049	3025	19860423	49635	1158
0251537	CABINET, FLOW, LAMINAR	EG6320	E27061	3375	19860423	49635	1166
1373810	TRAILER, BOAT	TP2024B	1M5EGGV28Y1043674	1749	20000314	49635	OUTSD
1614098	CAMERA, DIGITAL	E950	355593	2050	20000314	49635	1142
0268021	FREEZE DRYER, BENCHTOP	75035	NONE	2573	19860915	49635	1151
0268185	ANALYZER, SULFUR DIOXIDE	43A	43A20205189	7952	19861106	L71557	PAMSA
1120729	DATA LOGGER, SUBMERSIBLE WATER	DS3BS	11691	2945	19911104	49635	1110
1120730	DATA LOGGER, SUBMERSIBLE WATER	DS3BS	11692	2945	19911104	49635	1110
0401831	DETECTOR SYS	5970A	2238A00197	32900	19831031	49635	1182
0417184	MANIFOLD	25-047-00	NONE	1082	19831205	49635	1167
0417314	CHROMATOGRAPH	0254-0295	057376	12415	19831220	49635	1181
0417319	BRIDGE	31	10006	773	19831220	49635	1182
0417324	MONITOR	8840	522	6568	19831220	L71557	PAMSA
0417344	WASHER	3000	34123	13439	19840109	49635	1170
0417345	DRIER	8000	9622	4696	19840110	49635	1170
0426203	METER, CONDUCTIVITY	11000	1390	1155	19840120	49635	1158
1373309	INCUBATOR, READER	513001-12	DCSA3248	15000	19931116	49635	1135
1373310	SEALER, FILLER	511002-2	SPSA3249	17000	19931116	49635	1135
1373305	PRINTER, ADP	P710A	61P1053814	1000	19931116	49635	1135
1373304	BACTOMETER	128	BPU1676	19500	19931116	49635	1135
1373311	READER, AUTOMATED, ATB	ATB1525	R041807	12000	19931116	49635	1147
1373314	PRINTER, ADP	P710A	61P1053833	1000	19931116	49635	1135
1373313	COMPUTER, DIGITAL	PS/1-2121C42	23-2602069	1200	19931116	49635	1147
1373723	DATA LOGGER, DIGITAL FIELD	DS-BS	25348	4936	19950829	49635	1110
1373315	PIPPETTE, ELECTRONIC, ATB	219-090080	21Y09076	250	19931116	49635	1135
2022214	REFRIGERATOR	17805A18	P09K-476720-PK	6082	20000404	49635	1174
1373724	DATA LOGGER, DIGITAL FIELD	DS-BS	25350	4936	19950829	49635	1110
1373316	DENSITOMETER	ATB1550	R032200	500	19931116	49635	1147
1374137	SCANNER, OPTICAL READER	JX610	40100341	12495	19940304	M7355	3227
1132691	SPECTROPHOTOMETER	601	3614167017	5866	19920922	49635	1180
1132692	MODULE, ACCESSARY, CONTROL	335109	3624082017	1415	19920922	49635	1180
1120731	DATA LOGGER, SUBMERSIBLE WATER	DS3BS	11693	2945	19911104	49635	1110
2022276	ANALYZER, ELEMENTAL	PE2400	241N0020202	32780	20000422	49635	1181
2022270	PRINTER/SCANNER, ADP	C6689A	SGH9CE1N4S	819	20000419	MAC CO	
1871757	DISK DRIVE UNIT, JAZ	V1000S	W1MU3203FT	395	19980320	49635	1126
1871758	DISK DRIVE UNIT, JAZ	V1000S	W1MU450639	395	19980320	49635	1126
0490134	OSCILLOSCOPE	5113	B117470	3450	19840218	49635	1146
0490135	PLUG-IN UNIT	5A18N	B133833	710	19840128	49635	1146

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
0490137	AMPLIFIER	5A26	B063352	1140	19840218	49635	1146
0490164	ANALYZER SYSTEM	AUTOANALYZER 2	PR0020	16137	19840221	49635	1182
0490165	CARTRIDGES	116D661-01	TC60147	2521	19840221	49635	1182
0490166	CARTRIDGES	116D098-57	C60173	1003	19840221	49635	1182
0490167	HEATING ELEMENT	183B010-01	TF0028326	2355	19840221	49635	1182
0490168	CARTRIDGE	116D115-01	TC60266	1003	19840221	49635	1182
0490170	CARTRIDGE ASSY	116A443-01	TC60123	1840	19840218	49635	1181
0490171	DIGESTION UNIT	114A002-02	GG014	3525	19840218	49635	1181
0490172	ANALYSIS SYSTEM	460-0031WW	TC0403	14877	19840218	49635	1182
0490267	MANAGEMENT UNIT	5200XX	6243A	3531	19840228	49635	1143
0490340	MONITOR	45	AHM15660156	9360	19840307	49635	1123A
1142846	CURRENT SOURCE, CONSTANT	65	93101954	2490	19930824	FIT	
1518196	SCOPE, VISION, NIGHT	NV100	9603573	490	19970210	49635	1130
0044695	TRANCEIVER, HANDHELD	H99SA052H	654AUQ0148	1236	19941005	49635	1111
0044696	TRANCEIVER, HANDHELD	H99SA052H	654AUQ0147	1236	19941005	49635	1111
0044698	TRANCEIVER, HANDHELD	H99SA052H	654AUQ0146	1236	19941005	M7355	3106
1376536	DISK DRIVE UNIT	411	437G0533	1005	19940930	M7355	3227A
1376537	DISK DRIVE UNIT	411	437G0502	1005	19940930	M7355	3227A
1376538	DISK DRIVE UNIT	411	437G0514	1005	19940930	M7355	3227A
1376539	TAPE DRIVE UNIT	811	438G1216	2100	19940930	M7355	3227
1376540	TAPE DRIVE UNIT	811	438G1231	2100	19940930	M7355	3227A
1376541	TAPE DRIVE UNIT	811	438G1212	2100	19940930	M7355	3227
1376542	TAPE DRIVE UNIT	811	438G1220	2100	19940930	M7355	3227
1376543	TAPE DRIVE UNIT	811	434G1900	503	19940930	M7355	3227
1376544	TAPE DRIVE UNIT	811	434G1918	503	19940930	M7355	3227A
1376545	TAPE DRIVE UNIT	811	434G1893	503	19940930	M7355	3227A
1376496	COMPUTER, DIGITAL	P560	2594892	2675	19940928	L71557	PAMSA
1376498	COMPUTER, DIGITAL	P560	2594888	2675	19940928	1732	213
0574066	TACHOMETER	C891	1283106	172	19840320	49635	1147
0574772	CHAMBER ENVIR	3554-25	346483	1596	19840402	49635	1181
0574773	TURBIDIMETER	S83700	3460078	873	19840402	49635	1181
1127122	COLORIMETER	DR/700	920600002790	695	19920713	49635	1158
1979370	SERVER	ENT450	833F2C4E	24410	19980911	M7355	3227A
1979371	DISPLAY UNIT, COLOR	X7103A	9825KC0614	603	19980911	M7355	3227A
1979373	COMPUTER, DIGITAL	MMS	FZ78C	1785	19980902	M7355	3227
1979374	DISPLAY UNIT, COLOR	D1226H	4862A099	619	19980902	M7355	3227
1635429	CAMERA, DIGITAL	AGFA1280	01260036	750	19980908	49635	1110A
0812828	PRINTER, ADP, LASER	LZR650	9643913X	1365	19900912	49635	1147A

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
0641274	INCUBATOR	2300	6821728-7	4101	19840831	49635	1166
1516434	DISK DRIVE UNIT	611	637G2080	1156	19961003	M7355	3227A
1516435	DISK DRIVE UNIT	611	637G1959	1156	19961003	M7355	3227A
1516436	DISK DRIVE UNIT	611	637G2242	1156	19961003	M7355	3227A
1866864	COMPUTER, DIGITAL	447	332U4258	4697	19930909	M7355	3227
0816673	LENS, CAMERA, IMAGE, MAP	53-05-13	4X	540	19920131	49635	1134
1516621	ANALYZER, N0,NO2,NOX	42C	56580309	8861	19961010	L71557	PAMSA
1516622	ANALYZER, C0	48C	56699309	8397	19961010	L71557	PAMSA
1867281	PRINTER, ADP	Z600	B303W57	13070	19970605	60400	BAY
0658985	BALANCE	P1200	300904	695	19801231	49635	1170
0658990	INCUBATOR	XX63-004-00	2365	1452	19830930	49635	1166
0658997	METER, PH, PORT	190000-00	NONE	350	19821231	49635	1158
0658998	METER	11000	0517	932	19830930	49635	1158
0659000	WORK STATION*(FUME HOOD)	VBM400	SG18778V	3772	19821231	49635	1147
1870838	POWER SUPPLY	PML1250	3A15861009024SW	612	19971204	49635	115
0659293	MICROSCOPE	BH2	048861	4081	19830930	49635	1135
0659305	TEST SET, WATER	16800-00	1564	725	19830930	49635	1181
0659308	WORK STATION (FUME HOOD)	VBM400	G20472	4920	19830930	49635	1147
0659309	MICROSCOPE	M8	NONE	3175	19801231	1732	225
0659313	MICROSCOPE	BH2	207463	8943	19821231	49635	1135
0659322	MICROSCOPE	BVB73	NONE	560	19801231	49635	1122
0659323	VIEWER (LIGHT TABLE)	910558-1	64	1925	19731231	M7355	3227
0659324	VIEWER (LIGHT TABLE)	MIM2	00893	3542	19741231	M7355	3227
0659325	MICROSCOPE	STEREOZ00M95	2019	903	19741231	M7355	3227
0659337	ANALYZER, S02	43	ASM750692	6712	19781231	L71557	PAMSA
0659364	METER, COLORIMETER	DR100	4133	155	19830930	49635	1158
0659366	MICROSCOPE	560C1	206526	899	19801231	M7355	3227
0659368	MICROSCOPE	BVB73	NONE	560	19801231	49635	1145
0659383	MONITOR	8002	93981	3713	19781231	L71557	PAMSA
0659384	PHOTOMETER	1008AH	2312	6025	19791231	49635	1123A
0659386	ANALYZER	48	ACM13774141	6384	19821231	L71557	PAMSA
0659387	CALIBRATOR	1009MC	090	5840	19821231	L71557	PAMSA
0659396	ANALYZER	43	ASM750493	6712	19781231	L71557	PAMSA
0659397	MONITOR	8002	93984	3713	19781231	L71557	PAMSA
0659399	PURIFIER	8833	54976118	1358	19761231	L71557	PAMSA
1870839	POWER SUPPLY	PML1250	3A15861009027SW	612	19971204	49635	115
0659401	IMPACTOR	244	658	4139	19821231	L71557	PAMSA
0659404	CALIBRATOR	HBM1A	953	725	19821231	L71557	PAMSA

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
0659417	TERMINAL	503	2236A04369	5600	19830930	49635	1182
0816672	LENS, CAMERA, IMAGE, MAP	53-05-41	7X1X	540	19920131	M7355	3227
0659846	FLOWMETER	20	30084	6825	19830930	49635	1143
0659847	MICROSCOPE, STEREO	BG515	NONE	459	19801231	49635	1135
0659850	ANALYZER	48	AM14667148	6384	19830930	L71557	PAMSA
1867171	METER, AREA, LEAF	CI202	CIA1149	2880	19970520	M7355	3227
0668176	COLLECTOR	301	NONE	1695	19840907	49635	1146
1869252	PRINTER, ADP	C3541A	SUB7407011	1983	19970701	49635	1126
1613997	TAPE DRIVE UNIT	SDX300C	S0101129256	2745	19980923	M7355	3227
2022128	METER, CONDUCTIVITY, PH	250	403014	1232	20000602	49635	1182
1979768	COMPUTER, DIGITAL	LP MINI TOWER	0011005768	1168	19980929	49635	1135
1979769	DISPLAY UNIT, COLOR	TFV8705SKHKW	805544358	885	19980929	49635	1135
2022140	VEHICLE, ALL TERRAIN	TRX450ESW	478TE2246WA003832	7263	19981002	1732	1002
1980329	VEHICLE, ALL TERRAIN	TRX450ESW	478TE2248WA002164	7263	19981002	49635	OUTSD
0747656	CALIBRATOR	715	1507	895	19841214	L71557	PAMSA
0748756	BALANCE	PE160	D22079	1605	19850326	49635	1147
0748889	BLENDER LAB	400	12696	2395	19850409	1732	257
1635185	PROJECTOR, SLIDE	4600	83977	461	19980514	60505	1004
0749990	WATER PURIFICAT	16508	8504036	1638	19850812	49635	1151
0750377	ANALYZER	43	ASM750793	6712	19781231	49635	STRGE
0750378	MONITOR	8002	3020471	3713	19761231	L71557	PAMSA
0750380	POWER SUPPLY	CR36-6	2C	1000	19761231	L71557	PAMSA
0764804	RECORDER	4204	204771	595	19850409	L71557	PAMSA
0764805	RECORDER	4204	204772	595	19850409	L71557	PAMSA
0764806	RECORDER	4204	204772	595	19850409	L71557	PAMSA
0764809	RECORDER	4204	204774	595	19850409	L71557	PAMSA
0764810	RECORDER	4204	204779	595	19850409	L71557	PAMSA
0764811	RECORDER	4204	204778	595	19850409	L71557	PAMSA
2022447	RECORDER, VIDEO, SURVEILLANCE	AG-1070	B0TB00035	5828	20000619	49635	1130
1871201	DISK STORAGE UNIT	X5209A	739G1290	1073	19971008	M7355	3227A
1871202	DISK STORAGE UNIT	X5209A	739G1293	1073	19971008	M7355	3227A
1871203	DISK STORAGE UNIT	X5209A	739G1288	1073	19971008	M7355	3227A
1871204	DISK STORAGE UNIT	X5209A	739G1367	1073	19971008	M7355	3227A
1871205	DISK STORAGE UNIT	X5209A	739G1373	1073	19971008	M7355	3227A
1871206	TAPE STORAGE UNIT	X6230A	739G0460	4043	19971008	M7355	3227A
1980380	TAPE DRIVE UNIT	SGKTAP8MM010A	837G2616	1238	19981007	81900	148
1980374	COMPUTER, DIGITAL	ULTRA 5	FW83930442	3103	19981007	81900	148
1980375	COMPUTER, DIGITAL	ULTRA 5	FW83930413	3103	19981007	81900	148

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1980378	DISPLAY UNIT, COLOR	GDM5010PT	9838KN2127	1407	19981007	81900	148
1980376	DISPLAY UNIT, COLOR	GDM5010PT	837G3521	1407	19981007	81900	148
1980379	HARD DRIVE UNIT	SGXDSL010A9G	837G3521	1007	19981007	81900	148
1980377	HARD DRIVE UNIT	SGXDSK010A9G	837G3528	1007	19981007	81900	148
0813081	BINOCULARS	804	901774	188	19910422	M7355	3106
1388861	COLORIMETER, DIGITAL, PORT	46000-00	950400008238	695	19950516	49635	1158
0816276	BINOCULARS	713	5098	165	19910305	49635	1134
0816528	TRANSCEIVER, SABER	H99SA+052H	654ARS0512	1322	19910919	49635	1111
1033913	COLORIMETER	46000	910400916	695	19910506	49635	1158
0861568	RECEIVER, RADIO FREQUENCY	TRX 1000S	2-88-991	650	19880216	M7355	3220
0861569	RECEIVER, RADIO FREQUENCY	TRX 1000S	2-880992	650	19880216	49635	1130
1980460	NAVIGATION SYSTEM	TSC1	0220136090	9095	19981019	49635	1134
1388895	METER, CONDUCTIVITY	126	51449034	855	19950519	49635	1158
1388896	METER, CONDUCTIVITY	126	51449086	855	19950519	49635	1158
1388897	METER, PH	205A	007156	494	19950519	49635	1158
1388898	METER, PH	205A	007123	494	19950519	49635	1158
0862462	INCUBATOR	3550	588-006	1370	19880520	49635	1180
0862765	SONDE UNIT	SVR2-SU	05577	3325	19880422	49635	1110
0862766	DATA LOGGER, DIGITAL FIELD	5100-A	NONE	1734	19880422	49635	1143
0862767	DATA MANAGEMENT UNIT	5200-A	05552	1948	19880422	49635	1143
0862768	CONSOLE, PLANT WATER STATUS	3005	835	1835	19880630	60505	2013
0863175	TEST KIT,CHLORINE,DR100	41100-52	890234300	195	19900307	49635	1158
0863177	IMPACTOR	241	702	4139	19900307	L71557	PAMSA
1379819	ANALYZER, PHOTOMETRIC, OZONE	49	46496276	7794	19940114	L71557	PAMSA
1388899	CAMERA, HOUSING, UNDERWATER	VR400MPN	NONE	2300	19950523	49635	1143
0865595	METER, PH	J-5702-35	SP257A	695	19890217	49635	1182
0865779	REFRACTOMETER	410	411-004900	6041	19890329	49635	1182
0865782	AIR SAMPLER	87-200	389-202	6500	19890331	49635	1182
1374471	METER, CONDUCTIVITY	11000	1092	968	19940502	49635	1158
1374311	GENERATOR, AIR	75-80	A13552	2213	19940412	49635	1182
0866790	BRIDGE, CONDUCTIVITY	31A	A9015625	855	19900122	49635	1182
2022143	DETECTOR, UV	785A	007M9060909	5898	20000714	49635	1182
0867857	SHELTER, EQUIPMENT	8816	2340-1	21172	19900629	L71557	PAMSA
1980512	COMPUTER, DIGITAL	ULTRA 5	FW84330616	2756	19981111	M7355	3227
1980513	COMPUTER, DIGITAL	ULTRA 10	FW83920722	3510	19981111	M7355	3227
1980514	DISPLAY UNTT, COLOR	X7103A	9834KC1248	603	19981111	49635	1111
1980515	COMPUTER, DIGITAL	ULTRA 5	FW84240168	2212	19981111	M7355	3227
1980544	DISPLAY UNIT, COLOR	VCDTS21367	1M82304190	929	19981118	49635	1110A

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1980545	DISPLAY UNIT, COLOR	VCDTS21367	1M82304185	929	19981118	49635	1134
1980543	MOTOR, OUTBOARD	1135483VD	0G871223	5972	19981117	49635	OUTSD
1980546	DISPLAY UNIT, COLOR	CM751U	9838KE4649	938	19981119	M7355	3227
1980547	DISPLAY UNIT, COLOR	CM751U	9838KE4640	938	19981119	M7355	3227
1980548	DISPLAY UNIT, COLOR	CM751U	9838KE4645	938	19981119	M7355	3227
2021438	SAMPLER, AIR	7032-L	0038	16645	20000725	49635	1180
1384014	BINOCULARS	804	950261	248	19950616	49635	1130
1374204	TEST SET, SOIL MOISTURE	6050X1	1368	11554	19940509	49635	PAMSB
0869731	EVAPORATOR, ANALYTICAL	111	7153	1080	19890711	60505	2010
0869748	CONCENTRATOR, MICROPROCESSOR	LSC2000	89180002	7355	19890720	49635	1182
0869762	ANALYTICAL CONSOLE, MASTER	165A012-01	890084	25320	19890707	49635	1181
0869763	LINEAR SAMPLER	165A011-01	890059	3560	19890707	49635	1181
0869766	PRINTER, ADP	AL3-10A	Z7022081-83	668	19890707	49635	1180
0011761	TRANSMITTER, SCOUT	11103	06785	3830	19890705	49635	1143
2023062	SAMPLER, AUTOMATED W/STARTER	AS40-1	00060608	4929	20000727	49635	1181
0869857	RECEIVER, RADIO TELEMETRY	TRX1000S	7-892073	650	19890802	49635	1110A
0869858	RECEIVER, RADIO TELEMETRY	TRX1000S	7-892072	650	19890802	49635	1130
0870312	CHROMATOGRAPH, GAS	5890A	C128/83	14260	19890825	49635	1182
0870313	INJECTOR, AUTOMATIC	7673A	2932A14008	7038	19890825	49635	1182
0870314	INTEGRATOR	3396A	2841P02194	1835	19890825	49635	1182
1635432	CAMERA-RECORDER, VIDEO	XL1	2650401640	5169	19981207	M7355	3227
1614029	COMPUTER SYSTEM, DIGITAL	560Z	78AZC75	2780	19981207	49635	1110A
1980524	COMPUTER, DIGITAL	DCM	H2XH1	2960	19981207	60505	2011
1980525	PRINTER, ADP	C3990A	JPHF017907	575	19981207	60505	2011
1980526	DISPLAY UNIT, COLOR	D1028L	84779CBVM8	667	19981207	60505	2011
1980527	CONTROLLER, PNEUMATIC	PC10	045983	2418	19981207	60505	2011
1980528	SAMPLER, AUTOMATED	AS3500	10910620	15485	19981207	60650	2011
1980529	DETECTOR, ELECTROCHEMICAL	ED40	98090428	8167	19981207	60505	2011
1980530	PUMP, GRADIENT	GP50	98100471	10695	19981207	60505	2011
1980531	CELL, ELECTROCHEMICAL	ED40GOLD	046222	1395	19981207	60505	2011
1614030	CAMERA, COLOR	HVC20	8073677	3943	19981208	49635	1135
0871079	AUTOSAMPLER	LC600	8988-989	5500	19891103	49635	1181
0871812	BALANCE, ANALYTICAL	GA200D	4080	2380	19900125	49635	1181
0871820	RECORDER	011-A121-02	8295660	4852	19900129	49635	1182
0871821	COLORIMETER	199A001-05	89-0238	5103	19900129	49635	1182
0871822	COLORIMETER	199A001-05	89-0231	5103	19900129	49635	1182
0866636	GOGGLES	M802	1388	6395	19830223	M7355	3106
0872083	READER, MICROPLATE	E5002	E08189	8695	19900322	49635	1135

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
0872267	CABINET, FLOW, LAMINAR	EG6252	E38383	4434	19900518	49635	1135
1980626	PRINTER, ADP	C4094A	JPCD009672	3699	19981222	49635	1115
1980627	PRINTER, ADP	C4094A	JPCD013544	3699	19981222	M7355	3227
1980632	DISPLAY UNIT, COLOR	21B582BH11	78006880	879	19981224	49635	1146
1379559	CONTROLLER, INSTRUMENT	1802	95112708C	2700	19950220	49635	1181
1379560	PRINTER, ADP	HL GL	J49309404	600	19950220	49635	1181
0764808	RECORDER	4204	204773	595	19850409	L71557	PAMSA
2023250	MICROSCOPE STAGE, MOTORIZED	H101BHMP	16723	14840	20000901	49635	1135
2023251	COMPUTER, DIGITAL	MINI TOWER	1087281	2151	20000901	49635	1135
2023252	ANALYZER, MICROBIOLOGY	SCAN RDI	090	141840	20000901	49635	1135
2023253	LASER, MICROBIOLOGY	LASER	090A	25000	20000901	49635	1135
2023254	CONTROL MODULE	CHEM PREPS	99135327	21000	20000901	49635	1135
1392329	PRINTER, ADP, LASER	C2039A	JPGK157820	1940	19950812	49635	1110
1866863	COMPUTER, DIGITAL	447	310U5847	5712	19930408	M7355	3227
1980789	DATALOGGER, SERVEYOR IV	SVR4DL	S1240	1440	19990120	49635	1143
1133014	PRINTER, ADP	M3377A	MA00203863	358	19921022	49635	1166
1515414	COMPUTER, DIGITAL	BATC	5452012	1523	19960816	49635	1182
1866672	CHROMATOGRAPH, GAS	G1530A	US00007666	8680	19970414	49635	1182
1517326	REFRIGERATOR	REL5004A12	X08F314307XF	3845	19961030	49635	1147
1866673	PRINTER, ADP	C3916A	JPKK022366	1324	19970414	49635	1182
1390989	PUMP, RECIRCULATING, THERMAL	RS25AL101	RS019514	2260	19950330	49635	1181
1390986	HOMIGINIZER, TAS	T25S1	781529	1595	19951115	49635	1180
1390987	SHAKER, ORBIT	3590	0895	3124	19951115	49635	1181
1390988	BALANCE, MOISTURE	MB200	0110	2276	19951115	49635	1181
1613611	BINOCULAR	804	972082	250	19970718	M7355	3227
0817283	DETECTOR, ULTRASONIC	MINI2	002229	275	19931124	M7355	3106
0817284	DETECTOR, ULTRASONIC	MINI2	002226	275	19931124	M7355	3106
1866677	INCUBATOR, DUAL CHAMBER	NU177	72084AEP	4687	19970415	49635	1147
1373534	PRINTER, ADP	M3377A	MA00244096	321	19931111	49635	1182
1000762	ANALYZER, OZONE	49	49-29422-234	7605	19900919	L71557	PAMSA
1000763	CALIBRATOR, OZONE	49PS	49PS-29853-236	7056	19900919	L71557	PAMSA
1000922	ANALYZER, NITROGEN OXIDE	42	42-30266-237	8361	19900929	L71557	PAMSA
1393316	SERVER	544	539F1A49	19680	19951010	M7355	3227
1393297	DISK DRIVE UNIT	X569A	536G6018	2211	19951002	M7355	3227A
1393298	DISK DRIVE UNIT	X569A	536G5996	2211	19951002	M7355	3227A
1518024	FRACTION, COLLECTOR	FC203B	203B0011321	2137	19970227	49635	1182
1866020	SPECTROGRAPH	13283200	5957	87282	19970616	49635	1181
1866021	CIRCULATING SYSTEM, WATER	13212501	5597	1188	19970616	49635	1181

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1866022	AUTO SAMPLER	AS300	E3265	7120	19970616	49635	1181
1389165	GENERATOR, OZONE	165	39578293	2785	19950530	L71557	PAMSA
1033217	COMPUTER, DIGITAL	386-25	1331	3381	19901220	49635	PAMSB
1033516	INCUBATOR, CO2	1700	3971	4170	19910124	49635	1135
2024642	COMPUTER, DIGITAL	VL400DT	US04801870	954	20001207	49635	1182
1033701	RECEIVER, RADIO	TRX1000S	4-91 3939	700	19910415	M7355	3220
1033702	RECEIVER, RADIO	TRX1000S	4-91 3938	700	19910415	49635	1130
1033703	RECEIVER, RADIO	TRX1000S	4-91 3937	700	19910415	49635	1130
2022141	BOAT, FIBERGLASS	GUARDIAN	BWC7690EF191	16194	19910702	49635	YARD
1033990	ANALYZER, CARBON DIOXIDE	LI6251	1RG1-195	5700	19910513	60505	2000
1866862	WORKSTATION	147	111F3097	5456	19910520	M7355	3227
1034093	SAMPLER, BOAT	183S-SS	9105176	3995	19910607	49635	1182
1980838	DATA LOGGER	DATASONDE3	35036	2645	19990226	49635	1110
1980839	DATA LOGGER	DATASONDE3	NONE	2645	19990226	49635	1110
1026387	DATA LOGGER, SURVEYOR III	SVR3DL	11360	6436	19910801	49635	1143
1026388	DATA LOGGER, SURVEYOR III	SVR3DL	11362	6436	19910801	49635	1143
1515104	DISPLAY UNIT, COLOR	CPD17F23	7213219	565	19960810	49635	1182
1872821	OVEN, CONVECTION	1390FM	0400298	4820	19980623	49635	1151
1872822	OVEN, CONVECTION	M01490A	T03H385150TH	1975	19980623	49635	1180
1040595	DISK DRIVE UNIT	411	136G0338	556	19910924	M7355	3227A
2024658	ANALYZER, COMBUSTION SYSTEM	APOLLO 9000	00321006	29098	20010105	49635	1181
1126714	METER, SALINITY, CONDUCT TEMP	33	92C037567	539	19920512	49635	1143
1981621	CONVERTER, SCAN	VSC300	481705	6745	19990505	81900	148
1375115	AIR SAMPLER	220	2451	2515	19940707	49635	1174
1375116	AIR SAMPLER	220	2450	2515	19940707	49635	174
1375117	AIR SAMPLER	220	2449	2515	19940707	49635	1174
1375118	AIR SAMPLER	220	2448	2515	19940707	49635	1174
1375518	TITRATOR PLUS	960	3200	9600	19940806	49635	1182
1375516	PRINTER, ADP	SP2000AS	0506237	595	19940806	49635	1182
1375517	CHANGER, SAMPLER	960SC	85R114N08	7795	19940806	49635	1182
0863384	SAMPLER	76100	P1589	3695	19920918	49635	PAMSB
0863385	SAMPLER	76100	P1590	3695	19920918	L71557	PAMSA
0863386	SAMPLER	76100	P1591	3695	19920918	L71557	PAMSA
1132542	CHROMATOGRAPH	10S PLUS	TB920054	25024	19920910	60505	2000
1375311	POWER SUPPLY	LT1600X	01262	1534	19940712	M7355	3227
1375312	POWER SUPPLY	LT1600X	01264	1534	19940712	M7355	3227A
1375313	POWER SUPPLY	LT1600X	01263	1534	19940712	M7355	3227
1375314	POWER SUPPLY	LT1600X	01261	1534	19940712	49635	1110A

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1375317	POWER SUPPLY	LT2100LT	01503	1946	19940712	1732	209
0813380	METER, DUAL CHANNEL	902C	C15821-22	2780	19911212	49635	1182
1393518	CAMERA, BURROW, TORTOISE	FDM402	9039305	1400	19951110	49635	1115
1126777	DATA LOGGER, SURVEYOR III	SVR3DL	14430	3168	19920526	49635	1143
1126711	METER, DISSOLVED OXYGEM	51B	92B036376	481	19920512	49635	1143
1126712	METER, DISSOLVED OXYGEM	51B	92C037608	481	19920512	49635	1134
1126713	METER, SALINITY, CONDUCT TEMP	33	92C037568	539	19920512	49635	1143
0816715	METER, PH, DIGITAL	612	853262	104	19920512	49635	1143
1127056	DISK DRIVE UNIT	411	222G2438	776	19920625	M7355	3227A
1127057	DISK DRIVE UNIT	411	222G2432	776	19920625	M7355	3227
1635320	SWITCH, CATALYST	WSC2916MXL	FAA0226T18L	2307	19980707	49635	1107
1977159	DISK DRIVE UNIT, CD-RW	C4381A	HU822M3724	459	19980710	M7355	3227
0816596	BINOCULARS	804	921665	220	19920713	49635	1130
1126676	CAMERA, STILL PICTURE	102755	2030145	152	19920511	49635	1143
2023319	COMPUTER, DIGITAL	600	NONE	967	20010226	49635	1110
1659869	CAMERA, VIDEO	PC6606.0EX	3020	699	20010301	49635	1130
1659870	CAMERA, VIDEO	PC66038	3018	599	20010301	49635	1130
1659871	CAMERA, VIDEO	PC66038	3019	599	20010301	49635	1130
2024679	SURVEILLANCE SYSTEM, VIDEO	AG-1070DCP	H9TB00013	1995	20010301	49635	1130
2024680	SURVEILLANCE SYSTEM, VIDEO	AG-1070DCP	B0TB00016	1995	20010301	49635	1130
1142845	STANDARD, SPECTRAL IRRADIANCE	220M	M800	1290	19930824	FIT	
1660287	CAMCORDER	DCRTRV120	11270	475	20010316	49635	1115
1142989	REFRIGERATOR, LABORATORY	REL5004ABA	V10C145226VC	4355	19930902	49635	1147
1142371	READER, MICROPLATE	THERMOMAX	UVT06251	12795	19930810	49635	1135
1391030	TRAILER, BOAT	EZ1720	1ZE1BKZ14TP005068	1860	19960129	49635	OUTSD
1660289	RECEIVER, GPS	NONE	0220225347	3495	20010405	49635	1134
1373722	DATA LOGGER, DIGITAL FIELD	DS-BS	25349	4936	19950829	49635	1110
0816923	BINOCULAR, 8.5X44	804	950380	248	19950822	49635	1111
1981741	PRINTER, ADP	C3198B	ESB9322357	6995	19990727	81900	148
1613625	BALANCE, ANALYTICAL	AP250D	1118031923	2856	19990727	49635	1182
2024839	COMPUTER, DIGITAL	5347AS	0188100673	919	20010412	M7581	100
1505753	PRINTER, ADP	C3916A	USHC059948	1647	19960723	49635	1115
1505734	BOAT, PANTOON, 24'	L245ED	OMCL718PJ596	5728	19960709	49635	OUTSD
2023325	CAMERA, DIGITAL	C2100UZ	116709976	700	20010518	49635	1118
1981473	METER, TURBIDITY	800	8001571	733	19990902	49635	1143
1642595	CAMERA, VIDEO, CAMCORDER	DCRTRV315	1008919	1381	19990902	49635	1111
1981928	SWITCH, MODULE	WSC2924MXLA	FAA0327L11X	2500	19990902	M7355	3227
1981929	SWITCH, MODULE	WSC2924MXLA	FAA0327L0YB	2500	19990902	M7355	3227

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1506529	CHROMATOGRAPH,SPECTROMETER,GAS	QP5000	C70083400561	56484	19970604	60505	2011
1506530	COMPUTER, DIGITAL	1200W	127100506946	2500	19970604	60505	2011
1981653	DISPLAY UNIT, COLOR	828FI	22794F8KU669	625	19990910	49635	1181
1981472	CHROMATOGRAPH SYSTEM, ION	DX120	99070487	19503	19990910	49635	1181
2021251	SEALER, QUANTITRAY	WQTS2X	01369	2499	19991007	49635	1158
1613608	BINOCULAR	804	972061	250	19970718	49635	1123
1613610	BINOCULAR	804	972036	250	19970718	M7355	3106
2021686	SPECTRORADIOMETER	FSP3502500P	6160	62392	19991103	49635	1110A
2021687	COMPUTER SYSTEM, DIGITAL	PA1260UT2A	185109591	1950	19991103	49635	1110A
1871712	CAMERA, VIDEO,CAMCORDER	VLE46U	605514192	579	19980302	49635	1134
0044697	TRANCEIVER, HANDHELD	H99SA052H	654AUQ0149	1236	19941005	49635	1143

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1393730	INCUBATOR	2300MP	0201296	3827	19960327	M7355	2299F
1142983	REFRIGERATOR, LABORATORY	RPR504ABA	V11C145090VC	1963	19930902	1732	163
1393731	INCUBATOR	2300MP	0201396	3827	19960327	1732	189
0011268	CEPTOMETER	SF-40	1188227	1135	19881215	60505	1000
0011271	CAMERA MODULE, VIDEO	XC-77	13728	1126	19890111	1732	187
0011311	BALANCE	B2000D	38030031	2560	19890324	1732	255
0011314	BALANCE	PM1200	H54117	2466	19890411	1732	258
0011660	RECORDER, CASSETTE	VJ900	3516H1368	853	19871021	60505	1004
1392270	DISK DRIVE UNIT	MZFO001	SB375094	3980	19950509	M7355	3227
1133564	FREEZER	ULT1386-7DBA	N20C132531NC	5307	19930202	1732	HALL
1135437	DISPLAY UNIT, COLOR	1436LEGY	14150636	618	19930302	1732	174
1135449	ANALYZER, OXYGEN, DUAL CHANNEL	S3AII	C1060481	10800	19930302	60505	1000
1135450	ANALYZER, OXYGEN, DUAL CHANNEL	S3AII	C1060482	10800	19930302	60505	1000
1135473	MONITOR, OXYGEN	335	136170	1050	19930309	60505	1000
1517422	CHAMBER, AMI, HI-LO	3554-35V	1196-002	3724	19961123	1732	185
1517423	CHAMBER, AMI, HI-LO	3554-35V	1196-001	3724	19961123	1732	SURG
0045748	TAPE DRIVE UNIT	32008E	SSV6370003	1053	19961123	M7355	1037
1517471	PRINTER, ADP	C3982A	USBB025798	967	19961207	60505	2011
1132907	POWER SUPPLY	FD4.3KVA	FD4.3K09857	3686	19921015	1732	213
1121212	STRETCHER, NON-ELEVATING	2003SS11	00845-00002	1226	19920122	M7355	2297
1132800	COMPUTER, DIGITAL	C2703A	3233C60904	2210	19921005	66232	STOR
2021350	SCALE, BENCH	4630SS	909071R	2470	19990927	1732	189
1642596	CAMERA, DIGITAL	DC210PLUS	EKK84701771	497	19990208	60505	1004
2021351	GAS ANALYZER	LI-6262	IRG3-1090	10536	19990331	60505	2000
2021352	SPECTROPHOTOMETER	SF2000	SF2J075	4515	19991012	60505	2008
2021809	COMPUTER, DIGITAL	ULTRA 10	Page 129	3651	19991123	1732	
0104680	CONVERTER, VIDEO	GL1187	N00599	2300	19890425	1732	174
0104729	MAINFRAME	3421A	233A09999	2035	19890504	1732	COMM
0160694	COMPUTER, DIGITAL	DATABANK AT	3107001001	1608	19861210	1732	248
1393779	SAMPLER, AUTO, RANDOM ACCESS	LASCA1100	95115101	24500	19950728	49635	1181
1506240	METER, CONDUCTIVITY	30-10FT	97A0308AB	833	19970128	1732	210
1126950	REFRIGERATOR, MECHANICAL, FOOD	13-988-376G	14916949	3979	19920608	49635	1180
1866402	PRINTER, ADP	C3916A	USKC106217	1487	19970320	49635	1126
0161500	THRESHER, BUNDLE SMALL	SBTE	8703	2499	19870205	1732	HIBAY
0161589	SAW, TABLE	34-806F	87C08038	2295	19870403	60505	1000
0161590	DRILLING MACHINE, UPRIGHT	15-330	630887C87	1995	19870403	60505	1000
1505541	CENTRIFUGE, TABLE TOP REFRIG	362114	NGB96G20	7737	19960705	60505	2011
0161807	CALIBRATOR, DIGITAL PORTABLE	1541R	MBE1378N	1485	19870414	1732	255

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
0161808	METER, AIR VELOCITY	1440M5R	PCE2024-1	1780	19870414	1732	255
0161811	DEIONIZATION UNIT	SUPER Q4	04531C	8692	19870416	60505	2000
0162088	ANALYZER, GAS	AR203	2619	7800	19870521	60505	1000
1505391	FREEZER, LABORATORY	SPSAKT74FA	S6745096F	4103	19960624	1732	257
1515597	PRECONCENTRATOR, CRYOGENIC	7000	0114	23270	19960827	49635	1182
1120956	ILLUMINATOR	3000	300211	1021	19911118	1732	153
0162438	MICROSCOPE, OPTICAL	IMT-2	602103	12850	19870625	M7355	2272
2021818	RECORDER, REPRODUCER, VIDEO	AG1980P	G9TC00036	1029	19991206	1732	174
0162446	CALIBRATION KIT, FLOW METER	D800275	NONE	1696	19870626	60505	1000
0162509	POROMETER	LI 1600	SSP976	5500	19870622	60505	2000
0162535	SHAKER, ORBITAL	886013	160	3295	19870709	1732	249
1120957	ILLUMINATOR	3000	300667	1021	19911120	1732	153
0162859	WORK BENCH, LAMINAR FLOW	30909	070187	6156	19870804	1732	128
0163056	PYRONOMETER, PRECISION, SPECT.	PSP	26456F3	1590	19870807	1732	219
0163057	PYRONOMETER, PRECISION, SPECT.	PSP	26466F3	1590	19870807	1732	219
1375025	CAMERA, VIDEO	EV368	414654	2310	19940622	60505	1004
1375037	FLOWBENCH, LAMINAR	NU602400	59097ABT	6375	19940623	1732	189
1375060	INCUBATOR, BIOLOGICAL	130BLLX	94F3665.13	4379	19940629	1732	156
1375061	INCUBATOR, BIOLOGICAL	130BLLX	94F3665.12	4379	19940629	1732	156
1391396	MONOLITHIC ARRAY	QB2001	95052302	2414	19950627	NOC	
1391397	MONOLITHIC ARRAY	QB2001	95052301	2414	19950627	NOC	
1391398	MONOLITHIC ARRAY	QB2001	95052303	2414	19950627	NOC	
0163492	RADIOMETER, PRECISION, INFRARE	PIR	26407F3	2100	19870908	1732	219
0163527	SHAKING MACHINE, LABORATORY	224	452	1975	19870910	M7355	2299F
0163538	TEST SET, ELECTRONIC SYSTEMS	IA15	1097	2400	19870911	1732	COMM
0636466	POWER SUPPLY	LPT7202FM	1846	1250	19840810	M61671	38C4A
0163613	TABLE, LABORATORY	30909	080487	6156	19870914	1732	128
0163614	WORKBENCH-STAY CLEAN	30909	080387	6156	19870914	1732	185
1135474	MONITOR, OXYGEN	335	136169	1050	19930309	60505	1000
0163618	VACUUM PUMP	DD195	11AU-7	1313	19870915	1732	209
0163630	POROMETER, AUTOMATIC	AP3	AP37492	3285	19870916	1732	252
1120958	ILLUMINATOR	3000	300770	1021	19911120	60505	2010
0164153	TEST SET, ELECTRONICS SYSTEM	3421A	2338A08918	1827	19871020	1732	211
0164305	METER, PH, TEMPERATURE	SA720	RW47A	997	19871028	1732	153
0164752	ANALYZER, GAS INFRARED	AR500	2838	5450	19871214	1732	211
2021887	COMPUTER, DIGITAL	MMP	BV8A5	4075	20000105	M6399	3510A
2021888	DISPLAY UNIT, COLOR	P780	8412844	685	20000105	M6399	3510A
2021885	HYGROMETER, ANALYZER	2002	25232	4903	20000105	1732	147

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1135475	MONITOR, OXYGEN	335	136168	1050	19930309	1732	BPC
1142984	FREEZER, LABORATORY	UPF530ABA	V17C145436VC	2790	19930902	M7355	2297
0165650	SAMPLER, AIR, CENTRIFUGAL	940010	NONE	1275	19880115	1732	134
0165676	CHILLER, PORTABLE, WATER	STAC 5	87K608	6468	19871104	1732	HIBAY
0165678	COLD ROOM	C1212	NONE	15238	19880119	1732	244
0165679	DILUTER, GAS	GD600	GD600-11963	2080	19880119	1732	252
0165680	ANALYZER, LEAF CHAMBER	LCA2	LCA2-11814	7430	19880119	1732	252
0165681	CHAMBER, LEAF	PLC-B	PLC-B-11419	2070	19880119	1732	252
0165682	AIR SUPPLY UNIT	ASUM	ASUM-11860	2490	19880119	1732	252
0165683	DATA LOGGER	DL2	DL2-11275	2620	19880119	1732	252
0165684	GENERATOR, WATER VAPOR	WG600	WG600-11051	3500	19880119	1732	252
1121213	STRETCHER, NON-ELEVATING	2003SS11	00845-00003	1226	19920122	M7355	2295
1505371	INTERFACE	950A	6007250746	1794	19960620	49635	1182
1394146	DISPLAY UNIT, COLOR	0010907	SSM540A12948	870	19960507	1732	188
0166472	VOLTMETER, DIGITAL	8060A	4400131	314	19880126	1732	252
0166473	VOLTMETER, DIGITAL	8060A	4170686	314	19880126	60505	1001
0166474	VOLTMETER, DIGITAL	8060A	4400132	314	19880126	1732	187
0817202	METER, PH/ISE	290A	002982	530	19930215	60505	2000
1135349	BALANCE, ELECTRONIC	FX3000	5230981	1130	19930212	1732	244
1391066	PRINTER, ADP	C3150A	USFB249881	914	19960202	1732	98
1391067	PRINTER, ADP	C3150A	USFB249883	914	19960202	60505	1004
1373789	COMPUTER, DIGITAL	G3	XA930022GJ7	3426	20000128	1732	244
1373790	DISPLAY UNIT, COLOR	CPD-110GS	4047059	530	20000128	1732	244
1373791	DETECTOR, SEQUENCE	7700	100001097	80662	20000128	1732	244
1121214	STRETCHER, NON-ELEVATING	2003SS11	00845-00001	1226	19920122	M7355	2295
1121215	STRETCHER, NON-ELEVATING	2003SS11	00845-00004	1226	19920122	M7355	2295
1505880	CABINET,BIO-SAFETY ANIMAL CHNG	NU602400	68840ADU	7748	19960807	1732	189
1120976	CENTRIFUSE	5415C	39144	1554	19911212	M7355	2299F
1120977	CENTRIFUSE	5415C	39134	1554	19911212	M7355	2299F
1120969	RECEIVER, TELECORDER	PV-M2021	H1AA13231	610	19911211	M7355	3289D
1383280	HARD DISK DRIVE	ADV2000E	F509868	1150	19950803	1732	213
1517583	COMPUTER, SYSTEM, DIGITAL	SOLO2100	0006182080	4102	19961223	1732	244
1867440	S ECTRP JPTP,ETER	DR40000	9704U0000746	5250	19970530	M7355	2274
1869555	RECORDER, CAMCORDER	VML457	WK71431785	544	19970709	1732	187
1867438	FLOWBENCH, PORTABLE	800	1680	6166	19960516	1732	189
1121207	WORK BENCH, LAMINAR FLOW	30909B	693295-9110	7300	19920113	1732	225
1867668	DETECTOR, ULTRASONIC	UP 2000	22167	3596	19970630	1732	100
2022028	COMPUTER, DIGITAL	ULTRA10	FW00520543	3286	20000216	1732	247

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1866000	MONITOR, MULTI-GAS	1302C	367003	24273	19970219	49635	PAMSB
0239236	BALANCE, ELECTRONIC, TOPLOADIN	PE-16	EO6002	1350	19851120	1732	252
0239590	BALANCE, ANALYTICAL TOPLOADING	AE-100	E33152	1282	19860108	M7355	2272
0239748	METER, AIR VELOCITY	T5951-00	VCE1889-1	795	19860114	1732	187
0240070	ROTOR	JA10	1831	2160	19830930	66232	STOR
0240112	VACUUM CLEANER, WET-DRY	TP120H	080467	1054	19851029	60505	1000
0240523	OVEN, HORIZONTAL	1660	1660-16	6500	19860124	1732	HIBAY
1133053	WATERBATH WITH SHAKER	50	NONE	2665	19921103	1732	184
1121126	WORK STATION, LAMINAR FLOW	30910B	693242-9107	9042	19911217	1732	184
1121127	WORK STATION, LAMINAR FLOW	30910B	693242-9104	9042	19911217	1385	231
1120925	WORK STATION, LAMINAR FLOW	30909B	693239-9125	7300	19911113	1385	231
1120926	WORK STATION, LAMINAR FLOW	30909B	693239-9123	7300	19911113	1385	231
1132522	BALANCE PLATFORM	KC240S	1940020-7TS	3195	19920909	1732	189
1121245	POWER SUPPLY	UPS1-1.25K1G-RN	1140C0291	1917	19920130	1732	189
1121246	POWER SUPPLY	UPS1-1.25K1G-RN	1131C0291	1917	19920130	1732	247
1121247	POWER SUPPLY	UPS1-1.25K1G-RN	1125C1290	1917	19920130	1732	232
1121394	DETECTOR, LEAK	FLCK1	NONE	863	19920219	60505	1000
1121361	WORK STATION, LAMINAR FLOW	30910B	693476-9202	9042	19920217	1732	183
1132521	INDICATOR	8520	4300892-4UT	1400	19920909	1732	189
1133033	STERILIZER	120/208-240	176652	4985	19921027	M7355	2297
1379016	EXERCISE MACHINE, LEG PRESS	FL114	NONE	1593	19941205	K1096	1301
0250933	BALANCE, PRECISION	PE3600	E48272	900	19860213	M7355	2278
1135396	BALANCE, ANALYTICAL	ER120A	3505879	1435	19930310	1732	244
1516115	COMPUTER, DIGITAL	BATC	5576159	1568	19960916	60505	REC
1516465	COMPUTER, DIGITAL	BATC	5700647	1464	19961004	60505	REC
0251508	CHAMBER, PLANT GROWTH	M1148	M11-104-3.5K	45697	19860408	1732	210
1133561	ANALYZER, CO2	LI6251	IRG1-242	6100	19930201	60505	1000
1126949	FREEZER	13-988-326F	14516254	2259	19920608	49635	1180
0251917	CALIBRATION SET, LIGHT SOURCE	1800-02	ORC123-8604	2600	19860414	60505	2010
1373809	SCALE, DIGITAL	B50AS	5103610	1020	20000314	1732	227
1393689	MICROSCOPE STAND	IMT2	503002	5495	19960308	1732	153
1393690	BASE, ILLUMINATION, PLATFORM	SZH-ILLD	506014	1247	19960308	1732	248
1143166	DISK DRIVE UNIT	X559AST	33V5069	671	19930909	1732	232A
1393691	MICROSCOPE, STEREO, ZOOM	SZH10	151475	2274	19960308	1732	130
1393692	POWER SUPPLY	BH2RFLT3	412020	1212	19960308	49635	1135
0045978	ILLUMINATOR, VERTICAL FLUORES	IMT2RFA340	NONE	1364	19960308	1732	153
1393693	LIGHT SOURCE	IMT2LSRF340	842355	1057	19960308	1732	153
1393694	CONTROL UNIT, EXPOSURE	PMCB20	5H04842	1840	19960308	1732	153

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1393695	CAMERA, AUTOMATIC, 35MM	PMC35	4L01079	612	19960308	60505	2010
1393696	EXPOSURE BODY, AUTOMATIC	PM-PB20	5L01856	2285	19960308	1732	153
1393670	COMPUTER, DIGITAL	NEW TOWER	4455747	2490	19960305	49635	1182
1505854	FLOWMETER, DIGITAL	4700	5661	577	19960807	60650	2000
1133562	ANALYZER, CO2	LI6251	IRG1-243	6100	19930201	60505	1000
0817198	MULTIMETER	87	56910010	329	19930120	1732	187
0660458	STRETCHER	6887	735354	1012	19830930	NOC	
1379583	METER, CONDUCTIVITY	126	44527028	1055	19950307	49635	1158
1142218	COMPUTER, DIGITAL	447	315MZ391	4676	19931007	1732	232A
1121066	DISPLAY UNIT, COLOR	HM4119S-DA-OL	034CN0558	5000	19911210	1732	232A
1121067	DISPLAY UNIT, COLOR	HM4119S-DA-OL	117CN0590	5000	19911210	1732	247
1121048	SHAKING MACHINE, LABORATORY	676D	190925866	3398	19911204	1732	247
1133397	CENTRIFUGE, REFRIGERATED	CR4-22	29210231	11440	19930106	M7355	2299F
1142275	CONSOLE, MONOLITHIC LED ARRAY	QB2000	93062502	2900	19930708	NOC	
0817199	MULTIMETER	87	56910132	329	19930120	1732	188
2023286	FLUOROMETER, MODULATED	0S5FL	015706	11500	19970916	60505	2010
0401636	SAMPLER, AIR	M/G200	1426	1266	19831015	1732	BPC
0401637	SAMPLER, AIR	M/G200	1427	1266	19831015	1732	BPC
0401638	ANESTHESIA MACH	4105740-010	10201	2216	19831015	1385	212
0401708	COUNTER	1910A01	3138013	595	19831015	1732	187
0401709	COUNTER	1910A01	3138012	595	19831015	1732	187
0417033	OSCILLOSCOPE	314	311248	3648	19831015	1732	187
0417266	MICROSCOPE SYS	BHTS001	208208	6356	19831205	60505	2010
0417295	REFRIGERATOR, MECHANICAL, FOOD	813	14AP2	1360	19831205	1732	189
0426205	VACUUM CLEANER	TP120H	965508	741	19840120	1732	137
0426206	VACUUM CLEANER	TP120H	965515	741	19840120	1732	162
1388500	COMPUTER, DIGITAL	544	512F0335	6999	19950412	60505	2000
1388456	GROWTH CHAMBER, PLANT	Q7547B	M1252	22848	19950411	60505	2000
1388457	GROWTH CHAMBER, PLANT	Q7547B	M1251	22848	19950411	60505	2000
1388458	GROWTH CHAMBER, PLANT	Q7547A	M4806	54525	19950411	60505	2000
0437082	CAGE RACK SYS	30460R	6483	5958	19830930	1385	231
1131459	COMPUTER, DIGITAL	M5780	F12163SX724	2990	19980604	M7355	3117D
1388459	GROWTH CHAMBER, PLANT	Q7547A	M4807	54525	19950411	60505	2000
1388451	OPTICAL READER, DATA ENTRY	9560	95020600274	1037	19950406	1732	189
1126998	INCUBATOR	124L	9E2168	12874	19920612	1732	189
1126951	RECEIVER, TELEVISION, COLOR	F27188BT	033250263	799	19920608	1732	110A
1133398	TREADMILL	ST2000	207991	5041	19930106	K1096	1301
0817275	SENSOR, SOLIDS LOADING	CL10HYS	M10	6525	19930617	66232	STOR

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1391520	CONVERTER, PROTOCOL	PMS-CA	174-1503D95	2000	19950708	1732	189
2022216	COMPUTER SYSTEM, DIGITAL	PS426U0M1538	30468264U	2269	20000405	1732	110
1516276	COMPUTER, DIGITAL	BATC	5645271	1524	19960928	K61096	1301
1391488	ANALYZER, CO2 GAS	LI6252	1RG2-329	7267	19950706	1732	187
1133449	EXERCISER, BICYCLE	9500	CBA163989	1535	19930107	K1096	1301
1133454	OVEN, DRYING	1680	0500592	4199	19930108	1732	HALL
1133426	MULTIMETER, DIGITAL	8060A	5665373	372	19930112	1732	252
1142338	CAMERA, VIDEO, COLOR	TK980U	10853188	740	19930719	1732	153
0044564	OPTICAL READER, DATA ENTRY	PHT60	STE5201135	2269	19931213	1732	187
1373661	DATA LOGGER, DIGITAL	2625A	5944607	2596	19940106	60505	1000
1373662	DATA LOGGER, DIGITAL	2625A	5959601	2596	19940106	60505	1000
1373663	DATA LOGGER, DIGITAL	2625A	5884607	2596	19940106	1732	227
2020584	SCALE, BALANCE	BL-410S	1110718	1195	20000411	1732	252
2020582	SOLDERING STATION	PRC2000	05000323	4086	20000411	1732	188
2020583	FILTRATION SYSTEM, AIR	EVAC ARM 250	NONE	1465	20000411	1732	188
1120794	CENTRIFUGE	5415C	37047	1554	19911029	1732	244
1120795	CENTRIFUGE	5415C	36228	1554	19911029	1732	140
1132638	MULTIPLEXER	ESPL220	1N404422	4763	19920918	1732	213
1127664	RECORDER, THERMAL	WR5000	2050515	9990	19920901	60505	1000
1127665	RECORDER, THERMAL	WR5000	2031005	9990	19920901	60505	1000
1127666	RECORDER, THERMAL	WR7700	2050460	4800	19920901	60505	1000
1142339	CAMERA, VIDEO, COLOR	TK980U	10853189	740	19930719	1732	211
1373645	MONITOR, ECG, DEFIBRILLATOR	803800-315	00015250	4645	19940128	M7355	3219
1869171	STARTER KIT, SNAP-LITE	APS2509	97081402	10955	19970828	M7355	2278
1121049	MICROSCOPE	56	BL1003718	1884	19911204	1732	153
1391075	SHAKER, ORBITAL, DIGITAL	M49235	721960152497	1499	19960212	M7355	2274
1391076	SHAKER, ORBITAL, DIGITAL	M49235	721960152494	1499	19960212	60505	1000
1394394	COMPUTER SYSTEM, DIGITAL	ZPY8375QJ	67SDYJ000454	4758	19960522	60505	2009
1391077	SHAKER, ORBITAL, DIGITAL	M49235	721960152498	1499	19960212	60505	2000
1391071	SPECTROPHOTOMETER, SCANNING	DU600	4320132	14463	19960207	60505	2010
1391241	COMPUTER, DIGITAL	I486DIC33FT	4D373929	1166	19950614	1732	106
1388739	PRINTER, ADP, LASER	C2011A	USGB580076	4299	19950503	M7355	2297A
1391068	COMPUTER SYSTEM, DIGITAL	755CD	23CCHZN	5162	19960213	1732	188
1391069	COMPUTER SYSTEM, DIGITAL	755CD	23CCDRF	5162	19960213	1732	189
1391070	COMPUTER SYSTEM, DIGITAL	755CD	23CCDMY	5162	19960213	60505	1004
1391081	CENTRIFUGE, MICRO	5415C	68245	1677	19960213	1732	153
1121050	MICROSCOPE	56	BL1003675	1884	19911204	1732	153
1121051	MICROSCOPE	56	BK1003473	1884	19911204	1732	153

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1121052	MICROSCOPE	56	BK1003602	1884	19911204	1732	153
0490136	OSCILLATOR	5B12N	B079615	1090	19840218	49635	1146
0490320	BALANCE	PE2000	C39500	980	19840307	49635	1181
1135470	DISPLAY UNIT, COLOR	FS6605ATK	201003243	900	19930308	1732	187
1142574	COMPUTER SYSTEM, DIGITAL	M4440	FC321EQ9441	3735	19930807	60505	1004
0746689	STERILIZER	C2260	622834-12	1850	19830114	1732	153
1865899	COMPUTER, DIGITAL	544	706F055B	4615	19970214	1732	210
0162808	MICROSCOPE, STEREOZOOM 7	31-26-30-07	NONE	2586	19870805	1732	153
1376277	OVEN, HYBRIDIZATION	H9360	E6157	1696	19940913	1732	257
0659410	WORK STATION	VBM400	SG20407	3920	19830930	M7355	2299F
1121027	MICROSCOPE	CK2	106008	5146	19911203	1732	153
1376411	COMPUTER, DIGITAL	CQP590P	8001432830	1966	19940923	1732	187
0659728	CENTRIFUGE	IEC7R	23601714	3930	19830930	1732	147
0574834	WORK STATION	VBM400	S22016V	3920	19840406	1732	189
0574835	WORK STATION	VBM600	S22175V	4920	19840406	1732	139
1136048	CENTRIFUGE	HN-SII	235521306	1596	19930607	60505	2010
0594558	SAMPLER, AIR	940010	6312	1075	19840420	1732	134
0594559	SAMPLER, AIR	940010	6311	1075	19840420	1732	134
1379248	BATH, WATER REFRIGERATED	2095	1989	1696	19941221	1732	247
1379656	COMPUTER, DIGITAL	XPSP90	4LXGS	2000	19950313	1732	232
1379183	BATH, WATER REFRIGERATED	2095	1982	1696	19941209	1732	247
0602336	MICROSCOPE	BV1070	NONE	1078	19840503	1732	153
1121121	SHAKING MACHINE	3528	1191	3430	19911217	1732	186
1133330	INCUBATOR, CO2	2650	10BA2	6792	19921211	1732	189
1133331	INCUBATOR, CO2	2650	9204-001	6792	19921211	1732	209
1133341	DRIVE CONTROL SYSTEM, AC, DIG	ECLIPSE II	016007-15JT	4534	19921215	1732	HIBAY
1133342	DRIVE CONTROL SYSTEM, AC, DIG	ECLIPSE II	016015-15JT	4534	19921215	1732	HIBAY
1133332	BALANCE, ANALYTICAL	AJ100L	N28628	1580	19921214	1732	248
1133333	BALANCE, ANALYTICAL	AJ100L	N28628	1580	19921214	1732	155
1133334	BALANCE, TOP LOADING	PJ6000	N24064	1139	19921214	1732	156
1868056	COMPUTER SYSTEM,DIGITAL	SOLO 2100	0007474009	3481	19970716	1732	213
1133335	BALANCE, TOP LOADING	PJ6000	N24061	1139	19921214	1732	183
1379251	CAMERA, CLOSED CIRCUIT	WVCP410	49B12012	635	19950109	1732	BPC
1379252	CAMERA, CLOSED CIRCUIT	WVCP410	49B12102	635	19950109	1732	BPC
1379253	CAMERA, CLOSED CIRCUIT	WVCP410	49B12023	635	19950109	1732	BPC
1979439	COMPUTER, DIGITAL	M3979	XB8263QQCY3	1501	19980908	1732	OUTB
1979441	COMPUTER, DIGITAL	M3979	XB8263ROCY3	1501	19980908	1732	175A
0816774	STIMULATOR	S403	NONE	1736	19920713	M7355	2297

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1388143	METER, PH	520A	008405	714	19950317	1732	183
1379584	PRINTER	P780B	1QY1066404	232	19950307	1032	98
1141963	COMPUTER, DIGITAL	M2297LL	CK4205UE1H2	5149	19940804	60505	1002
1388144	METER, PH	520A	008481	714	19950317	1732	186
1133229	RECORDER, SIGNAL DATA	2625A	5660650	2840	19921112	1732	189
1388198	MIXER, LAB, BRUSHLESS	30600	NONE	1000	19950321	1732	247
0620936	SAW	810	IH84	888	19840515	1732	152
0632072	RECORDER	CYBEX II	C-4011626	21700	19840611	1385	HIBAY
0632200	CENTRIFUGE	HNS11	235511738	1082	19840629	1732	247
0635320	CHAMBER	M11-48	MIL9710K	28200	19840719	1732	210
0635321	CHAMBER	M13	MP1A1165	11075	19840719	1732	210
0635322	CHAMBER	M13	MP1A1155	18175	19840719	1732	211
0641230	AMPLIFIER	YSI53	3925	833	19840814	60505	2010
0641243	MONITOR	9-00283-14	39788	2427	19840820	M7355	3215
1133230	RECORDER, SIGNAL DATA	2625A	5660651	2840	19921112	1732	187
1383326	TAPE DRIVE	X844A	529G0742	2379	19950814	M7355	3227
0045747	METER, LIGHT	LI250	LMA232	475	19961002	1732	183
2022127	COMPUTER SYSTEM, DIGITAL	POWER BOOK G3	QT01231EHDS	3294	20000518	1732	OUTBK
1516625	COMPUTER, DIGITAL	ATX TOWER	5718870	3486	19961011	1732	174
0655935	OSCILLOSCOPE	321A	002820	912	19751231	1732	231A
1135762	CENTRIFUGE, REFRIGERATED	CR422	49304022	11440	19930428	1732	139
2022347	CHROMATOGRAPHY SYSTEM	215	250D0225	48088	20000522	1732	225
2022348	COMPUTER, DIGITAL	MMS	62UCP	1315	20000522	1732	225
2022349	DISPLAY UNIT, COLOR	P780	8832012	685	20000522	1732	225
2022350	POWER SUPPLY, UNINTERRUPTIBLE	SG5K2TXC	8810078023	5390	20000522	1732	225
1871369	POWER SUPPLY	6306D	671553	1011	19980915	1732	187
1133413	MICROSCOPE	BH2	201034	3597	19930105	1732	183
1133412	MICROSCOPE	CK2	107011	3256	19930105	1732	153
1000195	WORKSTATION, LAMINAR FLOW	36100	197584	4550	19901212	1732	251
1127613	WORKSTATION, LAMINAR W/HOOD FL	SG600	SL47051V	5544	19930316	1732	139
1135511	FURNACE	F30438CM	718921240364	4383	19930322	1732	HIBAY
1133414	MICROSCOPE	BH2	101375	2212	19930105	1732	153
0817195	CAMERA, MICROSCOPE	OM4T	1177062	895	19930105	1732	153
2023305	GAGE	5-780	03	994	19830930	49635	FIELD
0659363	SAMPLER	940010	2628	1075	19821231	1732	134
0659370	MICROSCOPE	560C1	206505	899	19801231	49635	1181
0659374	MICROSCOPE	BH2	207103	5120	19821231	1732	184
0659377	CENTRIFUGE	341735	2883	7650	19821231	1732	189

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
0659409	WORK STATION	VBM400	SG20406	3920	19830930	1732	139
0659412	MICROTOME	168-345	66645	2760	19811231	60505	2010
0659415	STERILIZER	14-460-10	121093	3500	19830930	1732	145
0659430	REFRIGERATOR, MECHANICAL, FOOD	EEL142CTWRO	E20735256	1008	19821231	60505	1000
0659432	STERILIZER	3260	610004	42526	19821231	1732	145
0817196	CAMERA, MICROSCOPE	OM4T	1195285	895	19930105	1732	153
0659729	METER	130	5787	1026	19821231	1732	248
0659730	OVEN	1326150	1840	1440	19811231	1732	247
0659732	CONTROLLER-RCDR	12R	1D00630	1050	19830930	60505	1000
0659733	INCUBATOR	5300	282169012	4510	19821231	1385	231
0659734	MICROSCOPE	BV1070P	312701424A	1643	19821231	1732	153
0659738	METER	130	5838	1026	19821231	1732	155
0659745	MULTIMETER	8050A	3220262	439	19830930	1732	187
0659746	VOLTMETER	530	01	265	19830930	1732	187
0659748	RECORDER	220	18590	3839	19830930	60505	1000
1133406	MICROSCOPE	BH2F	226476	10651	19930105	1732	153
1133407	MICROSCOPE	SZ60	127971	3150	19930105	1732	188
0659760	BUILDING, PORTABLE CLEAN ROOM	16X12X16	NONE	35144	19711231	1732	HIBAY
0659761	PUMP/DILUTER DISPENSER	83059	121510	1150	19830930	1732	247
0659762	CHAMBER	M11-48	M118710K300	28863	19830930	1732	211
0659776	MULTIMETER	8060A	3245601	332	19830930	60505	1004
0659777	DIGITAL VOLTMETER	8060A	3221495	332	19830930	1732	187
0659779	CAMERA	OM-2	1069808	400	19821231	1732	153
0659780	TERMINAL	TT1A	PT1078302	650	19830930	1732	110
0659781	SPECTRORADIOMTR	211800-22	PRS1078302	14008	19830930	60505	2010
0659793	CENTRIFUGE	TJ6R	8082	3514	19801231	M7355	2297H
0659800	CAGE RACK SYS	30460R	51283	5957	19830930	1385	231
0659801	CAGE RACK SYS	30460R	6183	5957	19830930	1732	189
0659803	CAGE RACK SYS	30460R	5183	5957	19830930	1385	231
0659804	CAGE RACK SYS	30460R	5283	5958	19830930	1385	231
0659805	CAGE RACK SYS	30460R	5783	5958	19830930	1385	231
0659807	CAGE RACK SYS	30460R	5983	5958	19830930	1385	231
0659809	CAGE RACK SYS	30460R	6383	5958	19830930	1385	231
0659810	CAGE RACK SYS	30460R	5683	5957	19830930	1732	189
0659811	CAGE RACK SYS	30460R	5883	5958	19830930	1385	231
0659812	CAGE RACK SYS	30460R	6283	5958	19830930	1385	231
0659813	CAGE RACK SYS	30460R	51083	5958	19830930	1385	231
0659814	CAGE RACK SYS	30460R	51183	5957	19830930	1385	231

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
0659815	INCUBATOR	610	1182101	2105	19830930	1732	257
0659819	PROCESSING MACH	M7B	16284	7160	19830930	1385	214
0659824	WASHING MACHINE	CWBR3065	NONE	29845	19821231	1732	137
0659825	STERILIZER	3230	601444	52482	19821231	1732	137
0659827	BALANCE	DS10	11869	1290	19830930	60505	2010
0659828	REFRIGERATOR, MECHANICAL, FOOD	813	12AM1	1515	19830930	1732	184
0659830	CAMERA KIT	42-12-48-37	NONE	775	19821231	1732	153
0659832	WATER STILL	056-770	NONE	1530	19821231	1732	225
0659833	CONTROLLER-RCDR	12R	4822094	1050	19830930	60505	1000
0659835	CONTROLLER-RCDR	12R	4822096	1050	19830930	60505	1000
0659836	CONTROLLER-RCDR	12R	4822093	1050	19830930	1732	129
0659842	GENERATOR	D150FRX4	557711	18250	19821231	1732	OUT
1133408	MICROSCOPE	SZ60	130504	1987	19930105	1732	153
1133409	CONTROL UNIT	AD	107036	2218	19930105	1732	153
1979550	COMPUTER, DIGITAL	MTP6B	9800044959	1634	19980919	60505	PAMSA
1979551	COMPUTER, DIGITAL	MTP6B	9800044958	1634	19980919	1732	213
1979552	COMPUTER, DIGITAL	MTP6B	9800044954	1634	19980919	1732	110
1979553	COMPUTER, DIGITAL	MTP6B	9800044960	1634	19980919	60505	2000
1979554	COMPUTER, DIGITAL	MTP6B	9800044962	1634	19980919	60505	2000
0660453	STRETCHER	6887	735356	1012	19830930	NOC	
0660454	STRETCHER	6887	735353	1012	19830930	NOC	
1979555	COMPUTER, DIGITAL	MTP6B	9800044959	1634	19980919	1732	209
0660455	STRETCHER	6887	735355	1012	19830930	NOC	
0660456	STRETCHER	6887	735351	1012	19830930	NOC	
0660457	STRETCHER	6887	735352	1012	19830930	M7355	2295
0660459	REFRIGERATOR, MECHANICAL, FOOD	813	13AN4	1515	19830930	49635	1182
1120962	INCUBATOR, C02	2250	1100591B	2659	19920102	1732	189
1133415	MICROSCOPE	IMT2	211015	10659	19930105	1732	153
0817193	CAMERA, MICROSCOPE	OM4T	1194256	948	19930105	1732	153
1133410	MICROSCOPE	SZH10	128016	4622	19930105	1732	183
1133411	MICROSCOPE	SZH10	128209	5454	19930105	1732	153
1979556	COMPUTER, DIGITAL	MTP6B	9800044957	1634	19980919	49635	1111
1120961	INCUBATOR, CO2	2250	0600191B	2642	19920608	1385	231
1979557	COMPUTER, DIGITAL	MTP6B	9800044961	1634	19980919	1732	247
1979559	COMPUTER, DIGITAL	MTP6B	9800044955	1634	19980919	1732	175A
1979560	DISPLAY UNIT, COLOR	M770	830AN002J00283	600	19980919	1732	209
1979561	DISPLAY UNIT, COLOR	M770	830AN002J00412	600	19980919	49635	1111
1979562	DISPLAY UNIT, COLOR	M770	830AN002J00285	600	19980919	1732	175A

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1979563	DISPLAY UNIT, COLOR	M770	830AN002J00402	600	19980919	1732	110
1979564	DISPLAY UNIT, COLOR	M770	830AN002J00402	600	19980919	1732	247
1979565	DISPLAY UNIT, COLOR	M770	830AN002J00305	600	19980919	1732	209
1979567	DISPLAY UNIT, COLOR	M770	830AN002J00277	600	19980919	60505	PAMSA
1979568	DISPLAY UNIT, COLOR	M770	830AN002J00442	600	19980919	1732	213
1979569	DISPLAY UNIT, COLOR	M770	830AN002J00441	600	19980919	60505	2000
0668174	COLLECTOR	301	NONE	1695	19840907	66232	STOR
0668175	COLLECTOR	301	NONE	1695	19840907	66330	1
1121424	READER, MICROPLATE	EL320	48193	9900	19920406	1732	248
1868064	CHILLER, THERMOREGULATED	2095	2120	2557	19970717	60505	2000
1375228	COMPUTER, DIGITAL	I486D2IC66FT	4D640446	1901	19940602	1732	211
1379313	PLANT GROWTH FACILITY	PGF2	PGF2008	9000	19950116	1732	187
1868065	CHILLER, THERMOREGULATED	2095	2118	2557	19970717	60505	2000
1391478	FREEZER, CHEST	GFC20M4AW1	NONE	2838	19950706	1732	POL
0691140	BATH STIRRER AY	5301	4220	1020	19841010	60505	2010
1979613	PRINTER, ADP	C4087A	USBB032279	2639	19980923	1732	OUT
2022129	PROJECTOR, MULTI-MEDIA	DP9250	G9207065	6962	20000602	60505	1004
2022130	SWITCHER, CHANNEL	ER10405A	667507	2564	20000602	60505	1004
2022470	PROBE, CALIBRATOR	TCAL2	TC20010	2750	20000606	1732	231A
1517100	REFRIGERATOR FREEZER, 20CU FT	3566	1096002	2180	19961019	1732	HIBAY
1516650	FREEZER, ULTRA LOW TEMP	SSC1075A12	X04F314052XF	5508	19961021	M7355	2297
1391479	FREEZER, CHEST	3555-6	0G95	2296	19950706	54905	127
1635680	CAMERA, VIDEO, COLOR	DXC390	100108	2200	20000605	60505	2010
2022469	DETECTOR, LIGHT SCATTERING	75	0070291C	15000	20000606	60505	2011
1133557	RECORDER, HUMIDITY-TEMPERATURE	CT485RS110V-W-AL	CT485AL028936P	620	19930129	NOC	
0659808	CAGE RACK SYS	30460R	43683	5958	19830930	1385	231
1866468	INCUBATOR, WATER JACKETED	3120	26666149	2874	19970327	1732	139
1866469	INCUBATOR, WATER JACKETED	3120	26666143	2874	19970327	1732	139
1132285	BAND SAW	2AC29A	NONE	1783	19930707	60505	1000
1133558	RECORDER, HUMIDITY-TEMPERATURE	CT485RS110V-W-AL	CT485AL028884P	620	19930129	M7355	2295
1866470	INCUBATOR, WATER JACKETED	3120	26666156	2874	19970327	1732	139
1866471	INCUBATOR, WATER JACKETED	3120	26666147	2874	19970327	1732	139
1866472	INCUBATOR, WATER JACKETED	3120	26666152	2874	19970327	1732	139
1871256	COMPUTER, DIGITAL	ATX TOWER	0008156263	1782	19971022	1732	213
1866473	INCUBATOR, WATER JACKETED	3120	26666144	2874	19970327	1732	139
1871257	COMPUTER, DIGITAL	ATX TOWER	0008156266	1782	19971022	1732	213
0698546	VAN	P70-0855	1FDNK64N2EVA046	78726	19841108	1732	HIBAY
1133370	CENTRIFUGE, TABLETOP	GS6R	GR92M36	8356	19921223	1732	163

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1866474	INCUBATOR, WATER JACKETED	3120	26666151	2874	19970327	1732	139
1866475	INCUBATOR, WATER JACKETED	3120	26666146	2874	19970327	1732	139
0698867	TACHOMETER, PHOTOELECTRIC	1891	1084	419	19841210	1732	244
1133576	COMPUTER, MICRO	144	250F6721	13781	19930203	1732	232
1871367	COMPUTER, DIGITAL	SMP PRO MIDTOWER	474636	5311	19980925	1732	213
1871368	DISPLAY UNIT, COLOR	VCDTS21367	1M82303849	1391	19980925	60505	1004
0738206	PRINTER	FX80	433391	601	19841022	49635	1146
1871258	COMPUTER, DIGITAL	ATX TOWER	0008156264	1782	19971022	1732	213
1866502	COMPUTER, DIGITAL	BATC	0006819587	1460	19970328	1732	174
1374009	CALIBRATOR, ELECTRONIC, RH	HMC20	618467	671	19940214	60505	1000
1374010	CALIBRATOR, ELECTRONIC, RH	HMC20	611744	671	19940214	60505	1000
1384260	INDICATOR, PRESSURE, ELECTRIC	PM	40103	1575	19951030	1732	100
0748645	MICRO-CRYOSTAT	IEC3398	33981859	6050	19850313	1732	189
0748757	WATER STILL	A1056	8309138	2463	19850326	M7355	2297G
1871263	DISPLAY UNIT, COLOR	CPDGF250T	8132688	619	19971022	1732	213
1871264	DISPLAY UNIT, COLOR	CPDGF250T	8132692	619	19971022	1732	213
0749151	ERGOMETER	7602	2016	4250	19850507	NOC	
0749474	SAMPLER	940010	4245	1075	19850604	1732	134
0749503	CAMERA	TC2511U	251261	674	19850611	1732	153
0749505	CAMERA	TC2511U	251258	674	19850611	1732	153
0749506	CAMERA	TC2511U	251255	674	19850611	60505	2000
0749698	RECORDER,VHS	AG2400	B5HB01614	1061	19850621	66235	113
0749701	RECORDER,VHS	AG2400	B5HB01223	1061	19850621	60505	2010
0749702	RECORDER,VHS	AG2400	B5HB01606	717	19850621	1732	185
0749703	RECORDER,VHS	AG2400	L4HB00850	717	19850621	1732	153
0749731	REFRIGERATOR, MECHANICAL, FOOD	426R	371185	1517	19850711	1732	134
0749732	REFRIGERATOR, MECHANICAL, FOOD	426R	371198	1517	19850711	1732	184
0749733	REFRIGERATOR, MECHANICAL, FOOD	426R	371187	1517	19850711	1732	HALL
0749734	REFRIGERATOR, MECHANICAL, FOOD	426R	371183	1517	19850711	1732	189
1871219	COMPUTER, DIGITAL	604/240	1493568	2673	19971015	60505	2005
0749849	REFRIGERATOR, MECHANICAL, FOOD	813	14AS-3	1576	19850724	1732	184
0749850	REFRIGERATOR, MECHANICAL, FOOD	813	14AS-5	1576	19850724	1732	SURG
1133577	DISPLAY UNIT, COLOR	GDM1962B	9247DX0208	2000	19930203	1732	232
0750005	GENERATOR	5300A	949	1095	19850807	1732	187
1871221	DISPLAY UNIT, COLOR	M2935	SG7243V735J	744	19971015	60505	2005
1872814	SCANNER, COLOR	MRS1200F36	S746734505A	1499	19980514	66235	102
1133293	METER, CONDUCTIVITY	152	20900050	699	19921125	1732	153
0750359	OSCILLOSCOPE, PORT	466	B200712	7875	19850911	1732	187

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1133227	COMPUTER, DIGITAL	I486DEC33SF	4D3-4045B	5011	19921112	60505	1000
1133286	ELECTRODE	LD2-2	M385	1600	19921125	60505	2010
1133287	RECORDER, TRANSCIENT	TR1	9217	1225	19921125	60505	2010
1133288	LIGHT SOURCE	LS2C	9231	1600	19921125	60505	2010
1133289	RECORDER	011324	09504	2650	19921125	60505	2010
0750496	MICROSCOPE	STEREO 7	NO SERIAL NO.	1335	19851001	1732	153
0750497	MICROSCOPE	STEREO 7	NO SERIAL NO.	1335	19851001	M7355	2272
0750912	METER, SURVEY	3031-2	97-485	485	19851007	1732	187
0750913	METER, SURVEY	3031-2	98-485	485	19851007	1732	187
2022448	CLEAN AIR SYSTEM, WORKSTATION	AC600LFUV	AC600-LFUV-384	2695	20000620	1732	244
1133307	POWER SUPPLY	PD35-10D	3120019	1111	19921208	60505	1004
1133308	POWER SUPPLY	PD35-10D	3120002	1111	19921208	1732	186
1133309	SOLDERING-DESOLDERING STATION	PPS80	01-07-312	700	19921208	1732	186
1121028	MICROSCOPE	CK2	106038	5146	19911203	1732	153
0594594	DYNAMOMETER	7201	4020606	5400	19840423	1385	HIBAY
1872815	CONTROLLER, OSMOSIS, REVERSE	3501	995390	6487	19980515	1732	MECH
0104757	ANALYZER, OXYGEN	S-3A/I	MS25800	7723	19890504	60505	1000
0659818	LIGHT	L950	D1363	6166	19811231	1732	SURG
1866595	CENTRIFUGE, AVANTI	J25I	JJY97C14	27106	19970408	1732	244
1980432	COMPUTER, DIGITAL	M3979	YA83907PDL4	1889	19981013	60505	1005
0749930	MONITOR, VIDEO	PVM 8200T	505899	586	19961203	1732	174
1908379	DISPLAY UNIT, COLOR	GDM5010PT	9838KN2129	1407	19981007	1732	1002
1133275	SHAKER, GYROTORY	G10	290929974	3132	19921119	66232	STOR
0749932	MONITOR, VIDEO	PVM 8200T	506163	586	19961203	1732	174
0816103	METER, CONDUCTIVITY	M109	02128	253	19900629	1732	255
0816107	METER, PH	107	06233	249	19900623	1732	255
1388862	COLORIMETER, DIGITAL, PORT	46000-00	950400008229	695	19950516	49635	1158
0816217	BALANCE, ANALYTICAL	AT201	L43674	4038	19910506	1732	185
0816219	METER	250A	002418	536	19910515	1732	153
0816228	SCALE, WEIGHT	PT600-OUR	40050042	531	19901029	1732	153
0816229	METER, CONDUCTIVITY	M109	02120	253	19900629	1732	255
0816298	CAMERA, MICROSCOPE	PM10AK	440010	3057	19910115	1732	153
0816299	CAMERA, MICROSCOPE	PM10AK	440367	3057	19910115	1732	153
0749933	MONITOR, VIDEO	PVM 8200T	506166	586	19961203	1732	174
0861500	CALIBRATION KIT, FLOW METER	D800275	NONE	1696	19960425	60505	1000
0863589	STRETCHER, TRANSPORT	721TS	92071638	3254	19930715	M7355	2297
1039895	CABINET W/LIGHT	4010	NONE	1088	19910807	1732	217
0861550	GROWTH CHAMBER	PGW36	713210U	8333	19880223	60505	2000

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0861551	GROWTH CHAMBER	PGW36	7A3001U	8333	19880223	60505	2000
0861552	GROWTH CHAMBER	PGW36	7K2175U	8333	19880223	60505	2000
0861553	HEAT EXCHANGER	NONE	NONE	3000	19880223	60505	2000
1388937	ROTAVAPOR	R114	15679	2726	19950515	1732	248
1126892	CAMERA, VIDEO, COLOR	TL98OU	15610895	822	19920605	1732	HALL
0861797	RECORDER, VIDEO	VO 9600	10453	3504	19880325	1732	174
0861818	THERMOMETER	210C	1307	3485	19880322	1732	219
0861819	THERMOMETER/INFRARED	210C	1308	3485	19880322	1732	255
0861915	MILLING MACHINE	4	NONE	5760	19880406	1732	HIBAY
1142986	FREEZER, LABORATORY	UPF530ABA	V17C145437VC	2790	19930902	1732	163
1980435	COMPUTER, DIGITAL	NLX MINI	0011141986	1257	19981014	1732	213
1980437	COMPUTER, DIGITAL	NLX MINI	0011141983	1257	19981014	60505	1004
0862067	LEG CURL MACHINE	NONE	120323	1851	19880429	1385	HIBAY
0862092	PRINTER	P82AA	08029233	2450	19880420	49635	1181
1980444	COMPUTER, DIGITAL	NLX MINI	0011118009	1260	19981014	60505	1004
1980446	DISPLAY UNIT COLOR	VX1100	T81023294	715	19981014	60505	1004
1980469	STARTER KIT, SNAP-LITE	APS2509	98092819	10955	19981021	60505	2000
1980470	STARTER KIT, SNAP-LITE	APS2509	98092820	10955	19981021	60505	2000
0862274	COMPUTER, DIGITAL	A2000	JA1001287	2776	19880504	1732	174
0862275	COMPUTER, DIGITAL	A2000	JA1000126	2776	19880504	1732	174
0862408	COMPUTER, DIGITAL	AT386	3818	5137	19880513	1732	188
0862458	FIBERSCOPE, PORTABLE	FS-100	FS100803005	775	19880520	60505	2000
0862468	METER, OXYGEN	OM-2	567	625	19880520	1732	187
0862469	METER, OXYGEN	OM-1	440	600	19880520	1732	187
0862472	BALANCE, DELTA RANGE	PM4600	407974	1338	19880520	1732	151
0862473	BALANCE, DELTA RANGE	PM34	H16586	1824	19880520	1732	152
0862474	PRINTER, ALPHANUMERIC	GA44	H15800	556	19880520	1732	152
0862475	PRINTER, ALPHANUMERIC	GA44	H15795	556	19880520	1732	152
0862484	RECORDER, VIDEO, SWITCHER	WJ-450	83AO2554	1436	19880526	1732	174
1870629	COMPUTER, DIGITAL	MDP002	35479	1864	19980109	M6399	3510A
0862788	CAMERA, TELEVISION	TC2011/NZ6	078352	1344	19880404	1732	187
0862821	WASHER/DRYER, GLASSWARE	NUC-50A	5-88-M11415-1	3237	19880630	M7355	2297G
0863164	SIMULATOR	NPN	S4924	31645	19781231	1732	HIBAY
0863568	CHAMER,GROWTH	PGW36	7D3243UF	8333	19900221	60505	2000
0863166	METER,OXYGEN	51B	11612	495	19900307	1732	247
0863180	BALANCE, ELECTRONIC	A120S	39050042	1714	19900205	60505	2310
2022449	COMPUTER SYSTEM, DIGITAL	PPX	70TIP	2829	20000626	1732	95
2022450	COMPUTER SYSTEM, DIGITAL	PPX	70TIS	2829	20000626	1732	OUTBK

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1040202	PRINTER, ADP, LASER	33491A	3120J33719	4706	19910918	M6399	2480
1388949	DISMEMBRATOR, SONIC	F550	F1687	2800	19950524	1732	249
1389071	AMPLIFIER, CHARGE	2635	1827906	1855	19950524	60505	2009
0864485	RECEIVER, TELEVISION, COLOR	PVM 8220	5009242	1038	19880928	1732	174
0864487	RECEIVER, TELEVISION, COLOR	PVM 8220	5009247	1038	19880928	1732	183
0864488	RECEIVER, TELEVISION, COLOR	PVM 8220	5009250	1038	19880928	M7355	2297
0864489	RECEIVER, TELEVISION, COLOR	PVM 8220	5009245	1038	19880928	1732	186
0864490	RECEIVER, TELEVISION, COLOR	PVM 8221	5004377	710	19880928	1732	174
0864491	RECEIVER, TELEVISION, COLOR	PVM 5300	5003343	2016	19880928	1732	232
0864501	RECEIVER, TELEVISION	SS-2010	7002297	500	19880929	1732	174
1389072	AMPLIFIER, CHARGE	2635	1827778	1855	19950524	60505	2009
1389073	AMPLIFIER, CHARGE	2635	1827774	1855	19950524	60505	2009
0864532	BATH CIRCULATOR, REFRIGERATED	2095	20108-1277	1335	19880721	1732	247
0864533	BATH CIRCULATOR, REFRIGERATED	2095	20108-1245	1335	19880721	60505	2000
0864534	BATH CIRCULATOR, REFRIGERATED	2095	20108-1288	1335	19880721	1732	247
0864535	BATH CIRCULATOR, REFRIGERATED	2095	20108-1244	1335	19880721	1732	247
0864536	BATH CIRCULATOR, REFRIGERATED	2095	20108-1292	1335	19880721	60505	2000
0864537	BATH CIRCULATOR, REFRIGERATED	2095	20108-1291	1335	19880721	1732	247
1389074	AMPLIFIER, CHARGE	2635	1827779	1855	19950524	60505	2009
0864898	OSMOMETER	5500	83161315	3595	19881118	1732	255
0864919	COMMUNICATION SYSTEM	TRBS-1/7	88193	9400	19881130	1732	232
0865250	CALIBRATOR, FLOW KIT	D800275	NONE	1696	19881206	60505	1000
0865251	CALIBRATOR, FLOW KIT	D800275	NONE	1696	19881206	60505	1000
0865315	INCUBATOR	124L	8L8337U	10910	19890103	1732	189
0865365	PLANT GROWTH FACILITY	PGF-2	PGF-2-0005	9500	19890202	60505	1000
0865520	PLOTTER, ADP	7595A	2839A16867	6041	19890207	60505	1004
0865594	CHROMATOGRAPH, GAS	10S70	6180285	13439	19890216	49635	1182
2022607	WASHER,LABWARE STAINLESS STEEL	G7783CD	53072269	12069	20000710	1732	137
2022608	WASHER,LABWARE STAINLESS STEEL	G7783CD	53072266	12069	20000710	1732	145
0865723	POWER SUPPLY	UPSI.5	75381	3030	19890310	M7355	3214D
0865877	DISPENSER, PERISTALTIC	72-665-000	2415	1995	19890411	1732	247
0866811	OVEN, MICROWAVE	FS10EVP-B	010994	1563	19900109	1732	249
2022142	METER, OXYGEN	5000	00A0561	1154	20000717	1732	247
0866893	CHILLER	CGACC154HBN2220T	L88L04938	9400	19890126	60505	OUT
0866894	CHILLER	CGACC154HBN2220T	L88L04939	9400	19890126	60505	OUT
2021401	COMPUTER, DIGITAL	NONE	NONE	966	20000719	1732	156
1866027	CLEANER,CANISTER, CNT'L MODULE	3000SL	00060	11990	19970221	49635	1182
0867127	WATER SYSTEM, REVERSE OSMOSIS	70B5	8804116	3110	19900108	M7355	2297G

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1867433	METER, PH	320	C12340	515	19970220	1732	153
1867437	METER, PH	320	C12377	515	19970220	M7355	2278
1136041	COMPUTER, DIGITAL	EISA.TOI486DX	FE00-03531	2102	19930604	1732	188
1980516	STARTER KIT, SNAP-LITE	APS2509	98102701	10955	19981111	60505	2000
1980517	STARTER KIT, SNAP-LITE	APS2509	98102702	10955	19981111	60505	2000
1980518	STARTER KIT, SNAP-LITE	APS2509	98102703	10955	19981111	60505	2000
1980511	DEFRIBRILLATOR	80546016	1169138	8790	19981110	M7355	2299
1374649	FLOWBENCH, LAMINAR	NU602400	58636ABR	6375	19940513	1732	189
1980551	VIBROSLICE, MOTORIZED	VSLM1	752M1638	4290	19981120	1732	184
1979450	THERMAL CYCLER	HBPX	7659HBPX110	4000	19981117	1732	244
1979451	POWER SUPPLY	5100	8J51681	3600	19981117	60505	2000
1980549	COMPUTER, DIGITAL	M4405	XA8440CLEQE	2338	19981120	60505	1002
1374203	FLOWBENCH, LAMINAR	NU602400	58635ABR	6375	19940509	1732	189
0869738	DETECTOR, LEAK, GAS	21-150	C464406	810	19890717	49635	1182
0869767	AQUARIUM, LABORATORY	503	NONE	3297	19890718	1385	231
0869810	METER, PH	720	TVT128A	846	19890726	1732	247
0869811	METER, PH	720	TVT44A	846	19890726	1732	255
1375262	DOCUMENT FEEDER, AUTOMATIC	C1751A	126568	462	19940608	1732	OBACK
1375214	POWER SUPPLY	PD3520D	5070026	1352	19940601	NOC	
0869883	RECORDER, VIDEO	GV-8	85847	953	19890809	1732	187
0869896	MULTIMETER	27	NONE	259	19890815	1732	186
0869930	OVEN, AIR, FORCED	645	25AX 4	5145	19890804	1732	HIBAY
0870071	ANALYZER, OXYGEN	7931-10	89-MPS849037-3	1973	19890901	1732	HIBAY
1872971	PRINTER, ADP	Z560	J23WT28	5137	19980601	1732	110
0870133	TERMINAL SERVER	NTS100	925P4926	2516	19890919	1732	HALL
0870262	STERILIZER, STERILMATIC	STM-EL	163592	3850	19890925	60505	2000
0870263	SHAKING MACHINE, LABORATORY	50	30AX-5	2014	19890925	1732	249
0870264	BALANCE, ELECTRONIC	PM16	J58087	2263	19890925	1732	247
1393992	ANALYZER, GAS	LI6252	IRG2362	7344	19960418	1732	232
0870813	PRINTER, ADP	M6000	CA905KCR	3219	19890919	M7355	2278
1393993	ANALYZER, GAS	LI6252	IRG2361	7344	19960418	1732	BPC
1980598	COMPUTER, DIGITAL	STARSTATION	4787810	4365	19981209	1732	232
1980599	DISPLAY UNIT, COLOR	G810	Q184356847	840	19981209	1732	232
1614031	CAMERA, AUTOMATIC, 35MM	PMC35	3J00076	713	19981210	1732	153
1614032	CAMERA, AUTOMATIC, 35MM	PMC35	3K01220	713	19981210	1732	153
2022144	PRINTER, ADP	2100	USGH076779	790	20000801	1732	225
2022145	COMPUTER, DIGITAL	E4200	0017942458	3140	20000801	1732	225
2022146	DISPLAY UNIT, COLOR	W900	T0A090860	938	20000801	1732	225

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1979502	SCALE, DIGITAL	CN20L	9810187	1318	19981210	M7355	22993
2022147	SPECTROMETER	LCQ DECA	LDE00333	177895	20000801	1732	225
2022148	ARRAY, PHOTODIODE	VV6000LP	030200726	14262	20000801	1732	225
2022149	SAMPLER, AUTO	A53000	030111025	12390	20000801	1732	225
0871076	METER, PH	PHI45	0166575	995	19891101	1732	244
0871130	MICROSCOPE	BH2	213797	8564	19891108	1732	153
0871472	RECORDER, VIDEO CASSETTE	V09600	14046	3186	19891117	M7355	2297
0871480	CENTRIFUGE, TABLE TOP	TJ6	9L016	3746	19891129	60505	2010
0871635	BALANCE	GT4800	3531	1119	19891215	1732	155
0871639	HOMOGENIZER	225318	201316	827	19900212	60505	2010
0871648	BALANCE, TOP LOADING	CT4800	3416	1217	19891207	1732	153
0871649	BALANCE, TOP LOADING	CT4800	3521	1217	19891207	1732	153
0871655	CENTRIFUGE, REFRIGERATED	J2-21	6015	16337	19891212	66232	STOR
1127614	GROWTH CHAMBER, PLANT	GC15	GC15-83-300WC3HLAHCF	23331	19930316	60505	2000
0871729	VACUUM PUMP	E2M-1	21482	1100	19900205	1732	189
1866548	COMPUTER, DIGITAL	ATX TOWER	0006902991	4599	19970404	1732	110
1871798	STILL, PURE WATER	A56230857	L970401B	5133	19980326	1732	145
0871819	MIXER, HOMOGENIZER	17105	000683	1696	19900129	1732	247
0871830	INCUBATOR, SHAKING	66722	18AX6	2198	19900130	1732	163
0871832	EVAPORATOR, VORTEX	432200	B139010	2447	19900131	60505	2010
0871846	FREEZER	RCU1386D-O-F	OZ84143E	5523	19900220	60505	2010
0871849	TABLE, VIBRATION ISOLATION	63-542-01	901152	2895	19900227	60505	2000
0871891	WATER BATH, ELECTRIC	260	28AX-10	1325	19900205	60505	1000
0871893	BALANCE, ELECTRONIC	L420S+	39080029	1629	19900205	60505	2010
0871898	CENTRIFUGE	11	OA010	1558	19900207	60505	2010
0871899	COMPUTER SYSTEM, DIGITAL	1535	NONE	7321	19900207	1732	188
0871900	DISK DRIVE UNIT	3401	NONE	263	19900207	1732	188
0871910	STERILIZER, GAS	400DGP	522333	22750	19900206	1732	145
1980612	POWER, SUPPLY	DCR4040B2	0173	1395	19981216	1732	189
0872020	VACUUM PUMP	EZM-1	21195	1100	19900312	60505	2010
0872108	HOMOGENIZER, LABORATORY	MARK II	415937	675	19900402	1732	154
0872123	PHOTOSYNTHESIS SYSTEM, PORTABL	LCA3	13552	14630	19900409	1732	252
0872124	LEAF CHAMBER	PLC3B	PLC3B13313	2613	19900409	1732	252
0872131	FREEZE DRY UNIT, 4.5 LITRE	7750000	207172	3065	19900226	60505	2010
0872190	METER, DIGITAL, PH	SA720	1783	763	19900420	1732	184
0872191	METER, DIGITAL, PH	SA720	1781	763	19900420	1732	153
0872298	METER, OXYGEN	51B	89K009320	425	19900516	60505	2008
0863491	PLANT GROWTH FACILITY	PGF-2	NONE	9500	19930715	60505	1000

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0872462	SPECTROMETER	20D	3322072089	1195	19900604	1732	183
1033216	COMPUTER, DIGITAL	386-25	1335	3381	19901220	60505	1000
1378859	POWER SUPPLY	UPSIIKIG	10706C	1134	19941115	60505	2000
1980658	COMPUTER, DIGITAL	AP4100	84305652AQ	1994	19990105	1732	213
1132829	PRINTER, ADP	M6000	CA227Y30	3532	19921007	1732	213
1866622	COMPUTER SYSTEM, DIGITAL	SOLO2100	0006904367	3943	19970410	60505	2005
1645631	CAMERA, DIGITAL, ZOOM	DC290	EKT01000683	862	20000821	60505	2005
2023117	ANALYZER, PLATE CRANE	NONE	11139230	13500	20000821	1732	248
2023118	READER, MICROPLATE	354	35400374	1800	20000821	1732	248
1120960	X-RAY UNIT	43855A	2317A00900	14016	19920821	1732	134
1379333	HEATER	143310000	950205016	4495	19950130	49635	1182
2023249	SPECTROPHOTOMETER	4001	35GC199026	1495	20000901	1732	225
0876330	PRINTER, ADP	M6000	CA81522VD	3144	19881017	1732	213
0816788	CAMERA, STILL PICTURE	9000XG	0862	496	19920701	49635	1143
0816789	CAMERA, STILL PICTURE	9000XG	0861	496	19920701	49635	1143
1373752	DISK DRIVE UNIT	DSU0	940701736	624	19960410	1732	232A
1375274	SHAKER, ORBITAL	M49235	721940466560	1005	19940609	1732	151
1375275	SHAKER, ORBITAL	M49235	721940466559	1005	19940609	1732	147
1375276	SHAKER, ORBITAL	M49235	721940466562	1005	19940609	60505	2010
1375277	SHAKER, ORBITAL	M49235	721940466558	1005	19940609	1732	147
1135580	ANALYZER, OXYGEN, DISSOLVED	9040	133	4620	19930405	66232	STOR
1133466	ANALYZER, PHOTOSYNTHESIS	LI6250	IRG1297	7100	19930112	1732	211
1133467	PHOTOSYNTHESIS SYSTEM,PORTABLE	LI6200	PPS1297	6700	19930112	1732	211
1515496	COMPUTER, DIGITAL	BATC	5473368	1459	19960819	M7355	1108
1132957	WATERBATH, WITH SHAKER	25	9209033	1919	19921016	1732	140
2023265	SHAKER, AUTOMATIC	AS200	200205009	2689	20000919	1732	252
1634710	CAMERA, DIGITAL	DC290	EKT02102088	719	20000919	60505	2007
1517357	INCUBATOR, BIOLOGICAL	I-35LLX	38060896J	6679	19961105	1732	149
1517358	INCUBATOR, BIOLOGICAL	I-35LLX	38060796J	6679	19961105	1732	149
1516285	COMPUTER, DIGITAL	P5-133	5678524	1823	19960828	M7355	3117D
0653058	OSCILLOSCOPE	2213	B030547	1056	19930119	1732	186
1393516	DISPLAY UNIT, COLOR	1782PS	J452804196	913	19951109	60505	2000
1517246	ANALYZER, INFRARED,CAR DIOXIDE	CEA244	2V1096195	1995	19961026	1732	247
1517352	COMPUTER SYSTEM, DIGITAL	SOLO2100	BC096440503	3943	19961104	1732	213
1517329	METER, CONDUCTIVITY, SALINITY	30/10FT	96K0007AC	925	19961031	1732	210
1373560	SEPARATOR, VIBRATING SCREEN	K181SS	13079	3598	19931122	66232	STOR
1980819	STARTER KIT, SNAP-LITE	APS2509	98123001	10955	19990201	60505	2000
2023385	CHILLER, WATER CIRCULATION	WK-1200	Y02006	2300	20001005	1732	183

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1645664	MICROSCOPE, DIGITAL	VH7000	37000415	25700	20001005	1732	225
1645665	LENS, ZOOM	VHZ450	102986	9200	20001005	1732	225
2023422	DISPLAY UNIT, COLOR	VHD700	0101729	2600	20001005	1732	225N
2023423	CAMERA STAND & XY STAGE	VHS1	103881	1800	20001005	1732	225
1515489	COMPUTER, DIGITAL	BATC	5473347	1459	19960819	60505	2000
1378962	STAND, MICROSCOPE, W/LAMP	BHTU	229279	5613	19941117	49635	1135
1378963	CONTROL UNIT, EXPOSURE	PMCB20	3C01593	3823	19941117	60505	2010
1378964	CAMERA, AUTOMATIC, 35MM	PMC35	3C08969	1174	19941117	60505	2010
1000035	REFRIGERATOR	LR124AOA	PZ8414-1E	1626	19900314	60505	2000
1000036	FREEZER	LF1230AOA	PZ8414-2E	1871	19900314	60505	2000
1000088	SHAKING MACHINE, LABOATORY	886013-0	00216	3311	19900623	60505	2013
2023445	INCUBATOR	4230	000988865	6509	20001010	1732	225
2023446	INCUBATOR	4230	000988740	6509	20001010	1732	209
1000194	WORKSTATION, LAMINAR FLOW	36125	197835	3240	19900813	1732	25
1000307	METER, DIGITAL, PH	SA720	2401	968	19900807	60505	2000
1000420	METER, PLANT STRESS	MARK II	12489	9750	19900820	60505	2003
1000437	PACEMAKER	804641-01	00002384	3450	19900823	M7355	3219
1000706	VOLTMETER	181	475353	3403	19900915	1732	219
1980845	COMPUTER, DIGITAL	CMNB014ANF250	0800690E763E	16152	19990216	M7355	3227
1980846	DISPLAY UNIT, COLOR	GDM4011P	7027902	690	19990216	M7355	3227
1379001	LASER, HENE	LS05P	424-91044	536	19941202	1732	187
1001088	ERGOMETER, UPPER BODY	3630	3630H009407	3291	19901018	K1096	1301
1001166	PRINTER, ADP	33449A	274863	1840	19901025	1732	OUT
1001177	PRINTER, ADP	KX-P1124	OHMAQP20601	320	19901026	1732	227
2023458	COMPUTER, DIGITAL	G1U2RAID220S	1000615	18181	20001024	1732	213
1001353	SCALE, WEIGHT	ASP-56	11019040	158	19901119	1732	153
1001385	BALANCE, MICRO	B120S	40010306	1628	19901128	1732	183
1001386	BALANCE, MICRO	B120S	40030138	1628	19901128	1732	140
1001387	BALANCE, MICRO	B120S	40030069	1628	19901128	1732	155
1001388	BALANCE, MICRO	B120S	40030137	1628	19901128	1732	155
1001390	BALANCE, MICRO	B120S	40030049	1628	19901128	1732	225
1001392	BALANCE, MICRO	B120S	40029033	1628	19901128	1732	185
1392910	TAPE DRIVE UNIT	4000	SSC5280180	25	19950913	M6399	2146D
1133507	GROWTH CHAMBER, PLANT	GC15	GC15-81-300WC3HLAHCF	23331	19930118	60505	2000
1518025	ANTENNA, SATELLITE DISH, 10'	NONE	130431655	1800	19970311	60505	OUT
1518026	RECEIVER, SATELLITE	256VM	T1G921209805	550	19970311	1732	174
1389173	MONITOR, SENSAPHONE	1104	510SA0-00072	430	19950602	60505	2000
1389174	MONITOR, SENSAPHONE	1104	510SA00-00075	430	19950602	1732	232

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1391242	CHASIS, TEMPERATURE CYCLER	PTC200	EN001546	7990	19950614	1732	225N
2023547	FREEZER, LABORATORY	8584	98532	6868	20001031	1732	257
1133553	SCRUBBER, STEAM	44000	9210050814	3735	19930126	60505	2000
1981032	COMPUTER, DIGITAL	HX95	99021200H11	8875	19990305	M7355	3214E
0011799	BALANCE, TOPLOADING	E0D120	E2941119402760	1305	20001108	1732	225
2023565	COMPUTER, DIGITAL	M7721LLA	UV0393Y2JQ5	1499	20001110	60505	2007
2023583	INCUBATOR	136LLVL	1782.02	8315	20001114	1732	189
2023584	INCUBATOR	136LLVL	1782.01	8315	20001114	1732	189
2023580	AIR CONDITIONER	AV24H105C	J007167BS	1015	20001114	60505	PAMSA
2023578	COMPUTER SYSTEM, DIGITAL	2621RR5	60B4816	1600	20001114	60505	2008
1517292	DISPLAY UNIT, COLOR	M2942	SG63617C35H	985	19961026	1732	OUT
1517103	DISK DRIVE UNIT, CD-ROM	M3409	XB63702V8FB	4151	19961019	1732	OUTBK
1375359	RECORDER-REPRODUCER, VIDEO	SV01610	0018957B4	550	19940720	1732	174
1375360	RECORDER-REPRODUCER, VIDEO	SV01610	0019056B4	550	19940720	1732	174
1379334	ANALYZER, C02	LI-6252	IRG2302	6935	19950128	1732	247
1635141	CAMERA, MANUAL, 35MM	C35DA2	013273	994	19980319	1732	153
1375339	INCUBATOR, BIOLOGICAL	I30BLLX	94F366515	4380	19940715	1732	149
1375340	INCUBATOR, BIOLOGICAL	I30BLLX	94F366514	4380	19940715	1732	156
1375412	ANALYZER, GAS, C02	LI6251	279	6935	19940723	60505	2000
1375413	ANALYZER, GAS, C02	LI6251	283	6935	19940723	1732	BPC
0574870	METER	6000AP	NONE	741	19840409	60505	2007
1866219	PUMP, QUATERNARY	G1311A	US70601570	7836	19970311	60505	2011
1866220	DEGASSER, VACUUM, ON-LINE	G1322A	JP63204358	2300	19970311	60505	2011
1866222	COLUMN COMPARTMENT	G1316A	US64401751	1880	19970311	60505	2011
1866223	DETRECTOR, DIODE ARRAY DAD	G1315A	US64400676	9890	19970311	60505	2011
1659795	CAMERA, DIGITAL, ZOOM	DC290	EKT00902428	719	20001128	60505	2008
2023595	REFRIGERATION SYSTEM	RE120	Y36009	3035	20001130	1732	247
1659796	CAMERA, DIGITAL, MICROSCOPE	DP11N	0J08389	3200	20001129	1732	183
1659797	ADAPTERS, VIDEO/PHOTO	UTR30-2	0H19241	1413	20001129	1732	183
2023594	STAND, MICROSCOPE SYSTEM	BX60F5	0J04960	2833	20001129	1732	183
2023581	AUTOSAMPLER	G1329A	DE03005352	7446	20001115	60505	2011
1866213	OVEN, CONVECTION, GRAVITY	G01305A	T14F308270TF	1060	19970311	1732	247
1866214	OVEN, CONVECTION, GRAVITY	G01305A	S12F296943SF	1060	19970311	1732	HALL
1866215	OVEN, CONVECTION, GRAVITY	G01305A	T14F308257TF	1060	19970311	1732	HALL
1866216	OVEN, CONVECTION, GRAVITY	G01305A	S12F296945SF	1060	19970311	1732	SURG
1033215	COMPUTER, DIGITAL	386-25	1333	3381	19901220	1732	189
1033369	MICROSCOPE	SZ6045	0H0027	1494	19910114	1732	153
1033370	MICROSCOPE	SZ6045	0F0040	1494	19910114	1732	153

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1033371	MICROSCOPE	SZ6045	0F0058	1494	19910114	60505	2010
1033372	MICROSCOPE	SZ6045	300517	1494	19910114	1732	153
1033373	MICROSCOPE	SZ6045	300019	1494	19910114	1732	153
1033374	MICROSCOPE	SZ6045	300238	1494	19910114	1732	153
1033399	CIRCULATOR, WATERBATH	2095	20241-1640	1600	19910124	60505	2011
1033400	CIRCULATOR, WATERBATH	2095	20241-1656	1600	19910124	1732	247
1033401	CIRCULATOR, WATERBATH	2095	20241-1657	1600	19910124	1732	247
1033433	CIRCULATOR, WATERBATH	2095	20241-1662	1600	19910131	1732	189
1033434	CIRCULATOR, WATERBATH	2095	20241-1635	1600	19910131	1732	189
1033436	INDICATOR, HUMIDITY W/PROBE	HMI31	399979	925	19910204	60505	2005
1033446	PULLEY COMBINATION, HIGH/LOW	4009	5142	1121	19901115	K1096	1301
1033450	CALF MACHINE, SEATED	2028	5206	1825	19901129	K1096	1301
1033493	BALANCE, WEIGHT	PM4800	L35349	1456	19910221	1732	185
1033494	TRANSILLUMINATOR, ULTRAVIOLET	FBTIV816	334673	1497	19910227	1732	250
1980843	BUILDING, MODULAR, OFFICE	NONE	NONE	6308	19901105	1732	HIBAY
1033559	OVEN, VACUUUM	285	10AZ6	1375	19910403	1732	247
1033578	CLEANER, VACUUM	PF25HM	P89F05601	768	19910315	1732	152
1033579	CLEANER, VACUUM	PF25HM	P90L11638	768	19910315	1732	137
2023293	MIXER, MINI BEADBEATER	UF80A12	LR95832	1288	20001207	1732	244
1033593	WORKSTATION, LAMINAR W/HOOD FL	SG600	SL40798V	5623	19910321	1732	139
1033594	WORKSTATION, LAMINAR W/HOOD FL	SG600	SL40988V	5623	19910321	1732	ACS
1033595	MICROSCOPE	CHS	OAO120	2457	19910318	1732	153
1033600	FUME HOOD, LABORATORY	93-409RO	NONE	8089	19910327	60505	2011
1033613	METER, HUMIDITY TEMPERATURE	HMI31	404403	715	19910401	60505	2000
1033614	METER, HUMIDITY TEMPERATURE	HMI31	404422	715	19910401	1732	187
1033633	MICROSCOPE	BH2	216041	8317	19910115	1732	248
1033634	MICROSCOPE	BH2	216030	8317	19910115	1732	153
1033635	REFRIGERATOR, 75 CU.FT.	C-NSPR763-009	91101306	4980	19910314	1732	189
1033637	CAMERA, STILL PICTURE	MP4	L00267	3278	19910218	1732	250
1033638	PHOTOSYNTHESIS SYSTEM,PORTABLE	LI6200	PPS1038	13795	19901205	1732	223
1033639	CYLINDER, CALIBRATION, GAS	6000-01	GCC000573	1050	19901205	1732	219
1033641	ANALYZER, CO2	LI6251	IRG1-177	5700	19901205	60505	1000
1033642	METER, AREA, PORTABLE	LI3000A	PAM1845	5500	19901205	60505	2010
1033643	CONVYOR BELT ACCESSORY	LI3050A-4	TBA1251	1600	19901205	1732	225
1033644	CONCENTRATOR	SC100	SC100-1B8257-1A	1680	19910228	1732	257
1033645	CONDENSATION TRAP,REFRIGERATED	RT100A	RT100-1B8151-1A	1308	19910228	1732	257
1033647	INCUBATOR, BIOLOGICAL	1-30BLLX	91B3494.12	3315	19910226	1732	252
1033648	INCUBATOR, BIOLOGICAL	1-30BLLX	91B3494.11	3315	19910226	1732	252

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
2023294	COMPUTER SYSTEM, DIGITAL	12XL300	1V09FP4BN63G	1374	20001211	1732	217C
1033880	ANALYZER, TOTAL ORGANIC CARBON	DC190	HK5358	23773	19910423	49635	1181
1033882	COPYING MACHINE	2510	64G042932	4090	19910422	60505	1004
1033904	STERILIZER, STERILMATIC	STM-EL	171257	4334	19910425	1732	257
1033960	BALANCE, ANALYTICAL	AE200S	L00350	2396	19910503	1732	153
1033961	BALANCE, ANALYTICAL	AE200S	L25299	2396	19910503	1732	151
1033962	BALANCE, ANALYTICAL	AE200S	L00354	2396	19910503	1732	183
1033963	REFRIGERATOR, LABORATORY	3558-5	291-003	1536	19910503	M7355	2272
1033980	METER, SURVEY	3	82471	315	19910511	60505	2011
1033987	POWER SUPPLY	4000	49618	2053	19910513	1732	244
1033989	ANALYZER, CARBON DIOXIDE	LI6251	IRG1-194	5700	19910513	1732	247
1034010	COMPRESSOR, CENTRIFUGAL	QRDS10B	5018631	5846	19910516	1732	HIBAY
1034042	OVEN, GRAVITY CONVECTION	OV18SA	18SA372	1345	19910529	1732	257
1518029	PRINTER, ADP	C3980A	USBB216963	795	19970225	M6399	3510
1039642	REFRIGERATOR, CHROMATOGRAPHY	REC5004A	102963	3310	19910620	60505	2010
1039647	MODULE, MOISTURE CONTROL	144700000	91157009	1295	19910621	49635	1182
1039684	POWER SYSTEM	ME31KVA	ME31K06529	3141	19910626	49635	1182
1039685	FREEZER	NSF17E	90102844	1356	19910626	1732	HALL
1039686	CENTRIFUGE	H1411	29103120	2550	19910626	1732	154
1039687	CENTRIFUGE	CR41212	29012244	4717	19910626	M7355	2297H
1039688	WATER PURIFICATION SYSTEM	04902	NONE	4519	19910626	49635	1182
1039762	METER, SURVEY, RADIATION	3	85606	407	19910723	1732	103
1039896	CABINET W/LIGHT	4010	NONE	1088	19910807	1732	217
1039934	DISPENSER, ICE	SERIES200	NONE	3011	19910813	1732	HIBAY
1039935	FREEZER, BIOLOGICAL	V1786DUA	SA-100666	5919	19910814	M7355	2297
1039940	EXERCISER, SMITH BENCH PRESS	5340A00194	53401043708	2220	19910822	K1096	1301
1039955	MULTIMETER, DIGITAL	8020B	5125172	313	19910813	60505	1004
1040022	MONITOR, OXYGEN	OXYGUARD4	3434	3949	19910820	1732	247
1040156	BENCH, LAMINAR FLOW	30910B	060890	8694	19910910	1732	186
1040157	BENCH, LAMINAR FLOW	30910B	060990	8694	19910910	1732	186
1040200	INCUBATOR	I24L	9E1147	10908	19910916	1732	189
1040201	INCUBATOR	I24L	9E1146	10908	19910916	1732	189
1394108	COMPUTER, DIGITAL	BATC AT	4652765	1870	19960426	1732	213
1645812	BALANCE, TOPLOADING	DI4KD	NI004435	1268	20010105	1732	247
2024659	INCUBATOR, LOW TEMPERATURE	307C	012N0333	2358	20010105	1732	249
1040091	CONCENTRATOR/EVAPORATOR	SC200	SC2001H34136-1B	2373	19910830	66232	HIBAY
1040098	POWER SUPPLY	PS1500	911048	1650	19910903	1732	244
1614095	CAMERA, DIGITAL, ZOOM	DC120	EKB80300687	748	19980622	1732	110

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1614067	CAMERA, DIGITAL	DC210	EKK91102027	712	19990421	1732	OUTBK
1981516	DEIONIZER, WATER	D4641	1090990166545	2883	19990422	60505	201
1120780	ELECTROCARDIOGRAPH UNIT	MAC VU	J1LR0209F	10866	19911029	M7355	2299D
1383187	HARD DRIVE, EXTERNAL	ADU2000E	E506231	1165	19950607	1732	213
1375469	DISK DRIVE UNIT	DSUO300F2	0620940156	624	19940729	1732	232A
1375070	POWER SUPPLY	PD3520D	6020008	1352	19940630	60505	2000
1375071	POWER SUPPLY	PD3520D	6020003	1352	19940630	60505	2000
1375072	POWER SUPPLY	PD3520D	6020010	1352	19940630	60505	2000
1375073	POWER SUPPLY	PD3520D	6020001	1352	19940630	60505	2000
1375074	POWER SUPPLY	PD3520D	6020009	1352	19940630	60505	2000
1375075	POWER SUPPLY	PD3520D	6020006	1352	19940630	60505	2000
1375467	RECORDER, REPRODUCER, VIDEO	SVO1410	0054484	325	19940801	60505	1004
1132905	COMPUTER, DIGITAL	2703A	3231C19517	1412	19921014	1732	232A
1133103	SCOPEMETER	97	DM5590237	1795	19921103	60505	1004
1133199	OSCILLOSCOPE	PM3365A	DM565003	3901	19921109	60505	1004
1126812	BALANCE	AJ100L	M65745	1566	19920528	1732	147
1121208	WORK BENCH, LAMINAR FLOW	30909B	693295-9113	7300	19920113	1732	183
0816590	ELECTROPHORESIS UNIT, DUAL	SE60015-1.5	91-2474	993	19911104	1732	244
1120726	POWER SUPPLY	PS500XT	91-1138	915	19911104	1732	244
1120727	BATH, WATER,REFRIG,CIRCULATING	RCB300	88050-13	1518	19911104	1732	244
1120728	SHAKER, ORBITAL, RED ROTOR	PR70	HSSPM-790	731	19911104	1732	244
1981636	SERVER	ENT250	916H2FD4	18259	19990503	M7355	3227
1981637	DISPLAY UNIT, COLOR	CM751U	9851KE0010	679	19990503	M7355	3227
1127130	ANALYZER, CARBON DIOXIDE	LI6262	IRG3-260	9300	19920716	60505	1000
1127253	CONCENTRATOR, OXYGEN	H10	S30J	988	19920803	1732	HIBAY
1121135	CENTRIFUGE, DYNAC II	0103	251116	1595	19911218	1732	163
1121136	CENTRIFUGE, DYNAC II	0103	251107	1595	19911218	1732	186
1121137	CENTRIFUGE, DYNAC II	0103	251117	1595	19911218	1732	153
1121142	INCUBATOR, C02	2250	1100591	2658	19920102	1732	189
1127254	CONCENTRATOR, OXYGEN	H10	S30H	988	19920803	1732	HIBAY
1127137	EXERCISER, STAIRMASTER	4000PT	C88277	2074	19920721	K1096	1301
0864484	RECEIVER, TELEVISION, COLOR	PVM 8220	5008318	1038	19880928	1732	153
1120921	COMPUTER, DIGITAL	47	118F1183	3539	19911113	1732	232A
1120922	TAPE DRIVE UNIT	X660Y	139G0002	1158	19911113	1732	232
1120923	DISK DRIVE UNIT	X559Y	1139G1134	735	19911113	1732	232A
1127139	EXERCISER, STAIRMASTER	4000PT	C88089	2074	19920721	K1096	1301
0165658	BATH,SHAKER	50	29AU-11	2235	19930526	1732	140
1126515	POWER SUPPLY	UPSI-IK-IG	1151C	1002	19920409	1732	227

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1126516	POWER SUPPLY	UPSI-IK-IG	1157C	1002	19920409	49635	PAMSB
2024674	MEASURING DEVICE	2619701	9110554	1550	20010201	1732	249
1126608	DISK DRIVE UNIT	DIAMOND DRIVE 120	D12000549	650	19920424	M7355	1037
1126952	INCUBATOR	2250	0600191T	2643	19920608	1385	231
1126966	PLANT GROWTH FACILITY	PGF2	NONE	10500	19920630	1732	188
1033632	MICROSCOPE, DISSECTING	SZH	093500	5753	19910404	1732	153
1126671	TREADMILL	Q55	0308-001-1696	5962	19920506	M7355	2297
1126894	CAMERA, VIDEO, COLOR	TL98OU	15610891	822	19920605	1732	152
1126895	CAMERA, VIDEO, COLOR	TL98OU	15610892	822	19920605	1732	189
1126896	CAMERA, VIDEO, COLOR	TL98OU	15610899	822	19920605	1732	HIBAY
1126897	CAMERA, VIDEO, COLOR	TL98OU	15610894	822	19920605	1732	188
0816574	MULTIMETER	8060A	5395292	372	19920406	1732	232
1126948	FREEZER	13-988-326F	14516256	2259	19920608	49635	1180
1635244	DISK DRIVE UNIT, JAZ	V2000S	X12V120FJE	550	19980622	66235	102
1635246	DISK DRIVE UNIT, JAZ	V2000S	X12V120AWR	550	19980622	66235	109
1981674	COMPUTER SYSTEM, DIGITAL	INSPIRON 7000	24969103A	2500	19990603	NOC	
1635247	DISK DRIVE UNIT, JAZ	V2000S	X12V120E74	550	19980622	1732	110
1635248	DISK DRIVE UNIT, JAZ	V2000S	X12V120F5F	550	19980622	66235	108
1635322	SWITCH, CATALYST	WSC2916MXL	FAA0226T18H	2307	19980707	1732	213
1977192	COMPUTER, DIGITAL	M3979	XB8218QCCY3	1739	19980622	1732	213
1127087	MICROWAVE DIGESTION SYSTEM	MDS2100	Z4048	13337	19920707	49635	1181
1127072	METER, CONDUCTIVITY	122	0910074	543	19920629	1732	153
1977194	COMPUTER, DIGITAL	M3979	XB8211VNCY3	1739	19980622	1732	106
1977196	COMPUTER, DIGITAL	M3979	XB8218P9CY3	1739	19980622	1732	105
1977199	COMPUTER, DIGITAL	M3979	XB8218R2CY3	1739	19980622	1732	106
1121627	PRINT SHARING UNIT	MIL3000	0040C800040E	809	19920331	1732	213
1121628	PRINT SHARING UNIT	MIL3000	0040C8000413	809	19920331	1732	213
0606984	TRUCK, LIFT, FORK, 2000LB	EC40C	67919	9739	19830330	60505	1001
1977292	COMPUTER, DIGITAL	M3979	XB8250SSCY3	1739	19980710	1732	101
2024682	REFRIGERATION SYSTEM	RE120	Y15046	3173	20010216	1732	225
1127632	FREEZER, LABORATORY	ULT390-5ABA	V07B122713VB	3884	19920826	1732	183
1127430	COMPUTER, DIGITAL	I386DIC33SF	3D3-3001B	2033	19920814	1732	213
1660286	CAMERA, DIGITAL	E990	20245205	740	20010228	M7355	1103
2023307	MICROSCOPE	AXIOSKOP2	LR65844	6247	20010226	1732	250
2023308	COMPUTER, DIGITAL	G4	XB0386LSK86	4983	20010226	1732	250
2023309	DISPLAY UNIT, COLOR	CPDG500	2763413	1370	20010226	1732	250
2023310	CAMERA, DIGITAL	2.2.1	201353	8000	20010226	1732	250
2023311	POWER SUPPLY	HB0100	627729	3889	20010226	1732	250

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1127129	COMPRESSOR CENTRIFUGAL	QRDS10B	5022697	5197	19920715	1732	HIBAY
1133546	FREEZER, ULTRAFLOW	ULT390-5-ABA	N21C132589NC	3884	19930205	1732	252
1981737	RECEIVER, TELEVISION	CCZ256AT31	12118972	530	19990619	M6399	3529
1613623	CAMERA, DIGITAL	MVCFD91	98110	940	19990619	M6399	3510B
1981738	COMPUTER SYSTEM, DIGITAL	PCG-505TR	289879303431048	1913	19990622	M6399	3529
1981739	COMPUTER SYSTEM, DIGITAL	PCG-505TR	289879303431073	1913	19990622	M6399	3510B
1981740	COMPUTER SYSTEM, DIGITAL	PCGF-270	283003303300643	2400	19990622	M6399	3510B
1142265	METER, AREA, PORTABLE	LI3050A4	TBA1369	1600	19930706	60505	2000
1142410	STRETCHER, TRANSPORT	721	93072743	2454	19930728	M7355	3289A
1142751	OVEN, VACUUM, DIGITAL	1430D	0500693	2306	19930812	1732	189
1142686	OVEN, CONVECTION, GRAVITY	1350GD	1000592	1079	19930811	1732	SURG
1142514	PRINTER, ADP	M5890	F1327OZ8108	2405	19930805	1732	106
1142515	PRINTER, ADP	M5890	F1327OZ9108	2405	19930805	1732	105
1142547	COMPUTER, DIGITAL, EMBEDDED	ZT200	11-12	5305	19930806	1732	187
0863588	STRETCHER, TRANSPORT	721TS	92071637	3254	19930715	M7355	2297
1143184	ANALYZER, SIGNAL, DIGITAL	2900	A0304	9303	19930914	60505	105
1143189	REFRIGERATOR, LABORATORY	RPR504ABA	V12C145170VC	1963	19930914	1732	163
1142979	REFRIGERATOR, LABORATORY	RPR504ABA	V13C145266VC	1963	19930902	M7355	2274
1142980	REFRIGERATOR, LABORATORY	RPR504ABA	V12C145172VC	1963	19930902	1732	185
1142982	REFRIGERATOR, LABORATORY	RPR504ABA	V12C145171VC	1963	19930902	1732	185
1142985	FREEZER, LABORATORY	UPF530ABA	V17C145439VC	2790	19930902	1732	163
1142987	FREEZER, LABORATORY	UPF530ABA	V17C145438VC	2790	19930902	1732	163
1142988	FREEZER, LABORATORY	UPF530ABA	V13C145267VC	2790	19930902	M7355	2272
1142837	FREEZER, LABORATORY	ULT13407DBA	V11C145066VC	5126	19930902	1732	139
1142981	REFRIGERATOR, LABORATORY	RPR504ABA	V11C145091	1963	19930902	M7355	2297
1375454	COMPUTER SYSTEM	4000E	16734404245	3267	19940727	1732	213
1143220	REFRIGERATOR, LABORATORY	RPR504ABA	W01C146935WC	1963	19930915	1732	163
1135838	CAMERA, VIDEO	CCD72	01475	2776	19930513	60505	2001
1135839	CONTROL UNIT, CAMERA	CCD72	01475	1000	19930513	60505	2001
1135840	CAMERA, VIDEO	CCD72S	NONE	1958	19930513	60505	2010
1143237	METER, DUAL CHANNEL	902C	C19286C19287	3639	19930917	66232	STOR
1143238	DUAL CHANNEL SYS, ELECTRONICS	905C	C19288C19290	4932	19930917	1732	247
1981486	COMPUTER SYSTEM, DIGITAL	M4440	FC321DBK441	3854	19930922	60505	2005
1373158	TAPE DRIVE UNIT	T2000	2115349	1411	19930928	60505	2001
1373156	PRINTER, ADP	M5890	F13240PX108	2189	19930928	1732	213
1373226	FEEDER, DRY MATERIAL	302	3-4609-93	3480	19931011	66232	STOR
0817338	CAMERA, VIDEO, CAMCORDER	AG3P	GEHE00162	2502	19931021	1732	188
0817339	CAMERA, VIDEO, CAMCORDER	AG3P	GEHE00163	2502	19931021	1732	188

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1373394	POWER SUPPLY, PROGRAM, DC	PPS2322	231622	1295	19931021	1732	188
1373395	POWER SUPPLY, PROGRAM, DC	PPS2322	231318	1295	19931021	60505	2010
1373396	POWER SUPPLY, PROGRAM, DC	PPS2322	231652	1295	19931021	1732	187
1373397	POWER SUPPLY, PROGRAM, DC	PPS2322	231617	1295	19931021	60505	1004
1981485	MONITOR, VIDEO, COLOR	PVM8044Q	2503828	1289	19960305	1732	188
1393663	MONITOR, VIDEO, COLOR	PVM8044Q	2503831	1289	19960305	1732	153
1393697	CABINET, LUMINAR FLOW SAFETY	NU602-400	66891ADN	7708	19960312	1732	189
1393698	CABINET, LUMINAR FLOW SAFETY	NU602-400	66892ADN	7708	19960312	1732	189
1393701	CHILLER, RECIRCULATING	394103010202	796060022	2095	19960312	49635	1181
1379558	ANALYZER, CHEMICAL	6882-4	95112702	16820	19950220	49635	1181
1391826	INCUBATOR, RADIANT HEART	305	0695-0209	997	19950728	1732	248
2024770	AIR CONDITIONER	SH14J30AA	LABR24888	1515	20010326	54905	127
2024788	COMPUTER SYSTEM, DIGITAL	KN5340AS	0027301432	817	20010326	60505	2007
1505060	FLOW BENCH, PORTABLE	800	1678	6166	19960918	66232	STOR
1505063	FLOW BENCH, PORTABLE	1200	1674	9916	19960918	1732	185
1505064	FLOW BENCH, PORTABLE	1200	1673	9916	19960918	1732	183
1391990	PRINTER, ADP, LASER	C2039A	JPGH029936	1940	19950807	1732	174
1505065	FLOW BENCH, PORTABLE	1200	1672	9916	19960918	1732	184
1383330	HARD DRIVE	X545A-ST	526G5183	769	19950814	M7355	3227
1393733	INCUBATOR	1-30BLLX	37591496C	4784	19960329	60505	2000
1393734	INCUBATOR	1-30BLLX	37591396C	4784	19960329	1732	156
1393735	INCUBATOR	1-30BLLX	37591596C	4784	19960329	1732	149
1144389	COMPUTER, DIGITAL	S585	448F3642	6712	19950105	M7355	3227
1144390	DISPLAY UNIT, COLOR	X267A	9443FC1963	1800	19950105	M7355	3227
1392907	DISPLAY UNIT, COLOR	D1562THS	7113744	431	19950912	49635	1181
1866733	DISPLAY UNIT, COLOR	D1528LS	65226A04UZ15	500	19950313	1732	232
1391072	DISPLAY UNIT, COLOR	D2803A	KR53495503	610	19960207	60505	2010
1981746	DISPLAY UNIT, COLOR	CPD110GS	4012238	1275	19990727	1732	244
1981747	COMPUTER, DIGITAL	GS	XA9171Z8GGM	3579	19990727	1732	244
1981745	ANALYZER, GENETIC	310	100000147	44921	19990727	1732	244
1613626	BALANCE, ANALYTICAL	AP250D	118183582	2876	19990727	60505	2011
2024882	LAMP, XENON	66921	173	6442	20010417	1732	209
2024883	POWER SUPPLY	68920	273	1515	20010417	1732	209
1982032	POWER SUPPLY	68920	275	1515	20010426	M7355	1223
1982033	LAMP, XENON	66921	180	6442	20010426	M7355	1223
1505750	CHROMATOGRAPH, GAS	6890	US00004545	14320	19960723	49635	1182
1505754	DETECTOR,MASS,SELECTIVE W/PUMP	5972	3609A03562	35050	19960723	49635	1182
1505881	CABINET,BIO-SAFETY ANIMAL CHNG	NU602400	68839ADU	7748	19960807	M7355	2274

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1393998	DISPLAY UNIT, COLOR	CPD17F23	7041703	630	19960422	1732	BACK
2026052	BALANCE, DIGITAL	APX2001	A21051069	636	20010522	1732	153
2026053	BALANCE, DIGITAL	APX2001	A21051062	636	20010522	1732	153
2026054	BALANCE, DIGITAL	APX2001	A21051065	636	20010522	1732	153
2026055	BALANCE, DIGITAL	APX2001	A21051070	636	20010522	1732	153
2026056	BALANCE, DIGITAL	APX2001	A21051060	636	20010522	1732	153
2026057	BALANCE, DIGITAL	APX2001	A21051061	636	20010522	1732	153
2026058	BALANCE, DIGITAL	APX2001	A21051067	636	20010522	1732	153
2026059	BALANCE, DIGITAL	APX2001	A21051058	636	20010522	1732	153
2026060	BALANCE, DIGITAL	APX2001	A21051068	636	20010522	1732	153
2026061	BALANCE, DIGITAL	APX2001	A21051066	636	20010522	1732	153
1982020	SCALE	I20W	14431	1000	19990803	1732	227
1982021	BALANCE	SB16001	118241458	2027	19990803	60505	2010
1981898	DRYER SYSTEM, FREEZE	7754010	990705367K	16543	19990816	1732	252
2026041	STRETCHER, TRANSPORT	721	0105030387	2160	20010517	M7355	2299
2026042	STRETCHER, TRANSPORT	721	0105030384	2160	20010517	M7355	2299
2026043	STRETCHER, TRANSPORT	721	0105030390	2160	20010517	M7355	2299
2026044	STRETCHER, TRANSPORT	721	0105030386	2160	20010517	M7355	2299
2026045	STRETCHER, TRANSPORT	721	0105030389	2160	20010517	M7355	2299
2026046	STRETCHER, TRANSPORT	721	0105030388	2160	20010517	M7355	2299
2026047	STRETCHER, TRANSPORT	721	0105030385	2160	20010517	M7355	2299
1982025	COMPUTER SYSTEM, DIGITAL	PCGF290	283001303105008	3478	19990820	1732	100
1982026	COMPUTER SYSTEM, DIGITAL	CF47	CF47EU6GAAM	2552	19990820	1732	147
2026067	REFRIGERATOR/FREEZER	13986106A	105N0160	1154	20010530	1732	
2026068	REFRIGERATOR/FREEZER	13986106A	105N0154	1154	20010530	1732	
2026069	REFRIGERATOR/FREEZER	13986106A	105N0155	1154	20010530	1732	
2026070	REFRIGERATOR/FREEZER	13986106A	105N0153	1154	20010530	1732	
2026120	MONITOR, BLOOD PRESURE	506DXNTP2	401419060	2472	20010601	1732	175A
2026121	MONITOR, BLOOD PRESURE	506DXNTP2	401419057	2472	20010601	1732	175A
1374145	DRYER, FREEZE, SPECIMEN	36DX66	206543	34875	19940310	1732	188
2024477	ICE MAKING MACHINE	ICE0500FA1	10170Z145Z	1775	20010430	49635	1107
1981927	ANALYZER	L1-6262	1RG31087	10536	19990826	60505	2000
1981471	FREEZER, UPRIGHT	FH1-SSB	J00091D	2655	19990902	1732	134
1981470	PUMP, DRIVE	752450	K98004063	1164	19990902	1732	247
1981469	PUMP, DRIVE	752450	F99000692	895	19990902	1732	247
2020562	ANALYZER, GAS, C02	LI800	AKC0224	2736	19990908	1732	210
1980540	CENTRIFUGE, MULTIPURPOSE	5804	00951	3970	19990916	1732	244
2021694	READER, MICROPLATE	20400	1CXD3791	11975	19991104	1732	244

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Equipment List

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
2021695	FLUOROMETER, PLATE	41100	374024110	11975	19991104	1732	244
1867439	FLOWBENCH, PORTABLE	800	1677	6166	19960516	66232	STOR
1867436	METER, PH	320	C12373	515	19970220	1732	140
1867434	METER, PH	320	C12361	515	19970220	1732	185
1867435	METER, PH	320	C12349	515	19970220	1732	153
1869162	COMPUTER, DIGITAL	M5433	XB720389A6V	3053	19970826	66235	9
1613797	CAMERA, MANUAL, 35MM	C35DA2	010594	861	19980302	1732	153
1981034	PRINTER, ADP	GE5258A	809A1019228	600	19990308	M7355	3214E

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1505079	STIMULATOR, MUSCLE,ELEC,ULTSND	FORTE CB450	0993	4112	19961111	M7355	1103
1515599	DISPLAY UNIT, COLOR	GDM20E20	9626GI2112	2000	19960827	M7355	3227
1515616	BICYCLE, SEMI-RECOMBANT	3710	3710H623005	2152	19960812	M7355	1108
1515617	BICYCLE, SEMI-RECOMBANT	3710	3710H622003	2152	19960812	K61096	1301
1515618	ROW/REAR DELT	452000191	4520N072429	2240	19960812	K61096	1301
1505533	WATER PURIFICATION SYSTEM	D7031	703960477558	1755	19960702	M7355	3214D
1516284	RECEIVER, TELEVISION, 27"	TP2783C101	60881123	469	19960928	M7355	1103
1375568	METER, PH/TEMPERATURE	620	001522	1023	19940813	M7355	3214D
1375900	UV SOURCE	U500	5001323	1249	19940818	M7355	3214D
1375901	SPECTROPHOTOMETER	340	007968TF	1270	19940818	M7355	3214D
1517632	ANALYZER, URINE CHEMISTRY	5772	125535	1500	19961227	M7355	3214C
1517391	POWER SUPPLY, UNINTERRUPTIBLE	PML1250	3A158507B6002SW	699	19961115	M7355	3227
1127005	PRINTER, ADP	C2106A	3220A20144	425	19920702	M7355	3211
1391683	TREADMILL	3000	308048	4960	19950714	M7355	1108
1391684	TREADMILL	3000	308058	4960	19950714	M7355	1108
1391275	CPU, MACINTOSH, IICI	M5780	FC332DHVCA8	3344	19980617	M7355	3117
2022215	RECORDER, VIDEO, DIGITAL	PROPAALETTE 7000	7B0124MF	5905	20000404	M7355	3227
1133399	TREADMILL	ST2000	207992	5041	19930106	M7355	1108C
1133448	EXERCISER, BICYCLE	9500	CBA163991	1535	19930107	M7355	1108
1133450	EXERCISER, BICYCLE	9500	CBA163990	1535	19930107	M7355	1108
1391502	FREEZER, MECHANICAL, DEFROST	ULT1230ABA	T14E-209267-TE	2418	19950706	M7355	HALL
0863569	DISPLAY UNIT, COLOR	GDM1962B	9303DX0256	1750	19930611	M7355	3227
2022268	SERVER	ST5-2P300SE18	080069134F74	29048	20000419	M7355	3227
2022269	DISPLAY UNIT, COLOR	GDM-5411	2407353	619	20000419	M7355	3227
2022288	PRINTER, ADP	C2693A	SG02L1312B	522	20000427	M6399	3510A
2022289	COMPUTER, DIGITAL	ULTRA 5	Page 129	2235	20000427	M7355	
2022290	COMPUTER, DIGITAL	ULTRA 5	FW01450655	2235	20000427	M7355	3227
2022291	COMPUTER, DIGITAL	ULTRA 5	FW01510348	2235	20000427	M7355	3227
1126969	POWER SUPPLY	V2E01	EAN9200784	4300	19920713	M7355	2297
1126970	AMPLIFIER, 4 CHANNEL	BP	EBU9200225	3560	19920713	M7355	2297
1388242	EXERCISER, STAIRMASTER	4000PT	C137028	2074	19950325	M7355	1114
1388243	EXERCISER, STAIRMASTER	4000PT	C136204	2074	19950325	M7355	1108
0659782	PROCESSING SYS	4414	662	3695	19801231	M7355	3214C
0659791	MICROSCOPE	910137	3800980030	9080	19801231	M7355	3214C
0659795	OSMOMETER	N6050-15	K12340	2686	19821231	M7355	3214D
0659861	SPECTROPHOTOMTR	U61800	34700	5743	19801231	M7355	3214D

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
0660443	METER, CONTAMINATION SURVEY	3031	81095	450	19821231	M7355	3214D
0660445	SPYROMETER SYS	EAGLE ONE	26600906	5990	19811231	M7355	3219
0816573	MULTIMETER	8060A	5395291	372	19920406	M7355	3107C
1872748	CALIBRATION SYSTEM, PIPETTE	30006	6185	4835	19980504	M7355	3214E
1635452	SCANNER	LS-30	255381	789	20000609	M7355	3227
0748998	METER, PH	19000	NONE	395	19850422	M7355	1108C
0862822	CENTRIFUGE, REFRIGERATED	3000I	88/1601D	7651	19880406	M7355	3214E
1378627	HEMATOLOGY SYSTEM	STKS810	W24235	89150	19940712	M7355	3214C
0863176	HOOD,FUME	22473	NONE	2815	19900307	M7355	3214D
0863679	GAMMA COUNTER, BENCH TOP	B5412	100358	10877	19880414	M7355	3214D
1392312	EXERCISER, STATIONARY, CYCLE	SEMI	3710H507008	2152	19950810	K61096	1301
1374172	FREEZER, MECHANICAL	ULT21757ABA	P09D159540PD	5600	19940324	M7355	HALL
1374278	REFRIGERATOR, MECHANICAL	REL7504A	P07D159381PD	4651	19940407	M7355	HALL
1374472	PRESS, LEG, ANGLED	FL114	NONE	1594	19940502	M7355	1108
1392314	EXERCISER, STATIONARY, CYCLE	SEMI	3710H521008	2152	19950810	M7355	1108
1392315	EXERCISER, STATIONARY, CYCLE	SEMI	3710H512028	2152	19950810	M7355	1108
1517635	BATH, WHIRLPOOL	E22M	S13909	2425	19961030	M7355	1108E
1392316	EXERCISER, DIP/CHIN	5345-001-97	5345N063107	1952	19950810	K61096	1301
1866918	DISPLAY UNIT, COLOR	CPDGF200	8029290	565	19970424	M7355	1108
1635459	CAMERA, DIGITAL	E950	728305	967	20000808	M7355	3227
1980628	EXERCISER, STAIRMASTER	4000PT	100081207031	2065	19981222	M7355	1108
1980629	EXERCISER, STAIRMASTER	4000PT	100081207032	2065	19981222	M7355	1108
2021195	EXERCISER, STAIRMASTER	4000PT	100081207021	2065	19981222	M7355	1108
1135532	EXERCISER, STAIRMASTER	4000PT	U92873	2074	19930325	M7355	1108
1135533	EXERCISER, STAIRMASTER	4000PT	U92864	2074	19930325	K1096	1301
2023124	REFRIGERATOR, LABORATORY	LR450A20	J03K493180VK	4395	20000831	M7355	3211
2023248	PROJECTOR, VIDEO	DX2	60G00015	4495	20000901	M6399	3510
1135617	DISPLAY UNIT, COLOR	GDM1962B	9248DW0958	2000	19930408	M7355	3227
1866560	PRINTER, ADP	C3980A	USBB145000	761	19970403	M7355	3117
2023342	PROJECTOR	DX2	60H01930	3999	20000922	M6399	3510A
1645652	METER, CONDUCTIVITY, OXYGEN	YSI 85D	00H1511AB	1051	20000926	M7355	3106
1645653	METER, CONDUCTIVITY, OXYGEN	YSI 85D	00H1511AA	1051	20000926	M7355	3106
1645654	METER, CONDUCTIVITY, OXYGEN	YSI 85D	00H1511AC	1051	20000926	M7355	3106
2023282	BINOCULAR, NIGHT VISION	OH1X20	00265	600	20000926	M7355	3117
1126967	COMPUTER, DIGITAL	SPIRIT SYSTEM	EBW9200216	8373	19980525	M7355	2297
1393317	DISPLAY UNIT, COLOR	GDM20D10	365132401	3500	19951010	M7355	3227

ECN	NAME	MODEL	S/N	COST	DATE ACQ	BLDG	ROOM
1133362	ANALYZER, CHEMISTRY	DIMENSION AR	920156	89900	19921221	M7355	3214E
1375461	DISPLAY UNIT, COLOR	P766DU	4171R000J00319	749	19940728	M7355	3215
1033444	CABLE CROSSOVER STATION	5310	5310H007910	2790	19901129	M7355	1108
1033445	PULLEY COMBINATION, HIGH/LOW	4009	5139	1121	19901115	M7355	1108
1033449	CALF MACHINE, SEATED	2028	5207	1825	19901129	M7355	1108
2023598	STIMULATOR, MUSCLE, ULTRASOUND	2C	4164	2143	20001207	M7355	1103
1039939	EXERCISER, SMITH BENCH PRESS	5340A00194	5340I043808	2220	19910822	M7355	1108
1039953	DISPLAY UNIT, COLOR	GDM1662B	4-030-471-02	3900	19910813	M7355	3227
1375087	OXIMETER	3740	FMQX01700	1200	19940701	M7355	3215
1375088	OXIMETER	3740	FMQX01699	1200	19940701	M7355	3215
1127138	EXERCISER, STAIRMASTER	4000PT	C88485	2074	19920721	M7355	1108
1121587	DEFIBRILLATOR, DC, LIFE PAK 9	803800-100	00008463	4645	19920319	M7355	3293
2024675	COMPUTER, DIGITAL	ATXSTFM866	0022205799	915	20010201	M7355	3227
2024676	DISPLAY UNIT, COLOR	EV700	NU17026D10580	678	20010201	M7355	3227
1126551	IRRIGATOR, AIR	3050	29591	2779	19920416	M7355	2297
1127140	EXERCISER, STAIRMASTER	4000PT	C88507	2074	19920721	K1096	1301
1515607	ROW/REAR DELT	452000191	4520N072029	2240	19960812	M7355	1108
1515608	ARM CURL	453500191	4535N053725	1840	19960812	M7355	1108
1515609	LEG EXTENSION	461100191	4611N007328	1840	19960812	M7355	1108
1515610	PRONE LEG CURL	461600191	4616N004125	1840	19960812	M7355	1108
1515611	AB CRUNCH	470500191	4705N051826	1840	19960812	M7355	1108
1515612	ASSIST DIP/CHIN	534500191	5345N095129	1924	19960812	M7355	1108
1515613	TRICEP PRESS	4055A00191	4055N102804	2152	19960812	M7355	1108
1515614	LOW PULL STATION	5301A00191	5301N034306	1672	19960812	M7355	1108
1515615	LOW PULL STATION	5301A00191	5301N034828	1672	19960812	M7355	1108
1981732	PRINTER, ADP	C4530A	U8671408C	600	19990625	M7355	3106A
2023314	PROJECTOR, MULTIMEDIA	EMP700	B9T0110084C	3814	20010316	M7355	3117
1143176	DISPLAY UNIT, COLOR	GDM1962B	9314DX1155	2000	19930909	M7355	3227
1392313	EXERCISER, STATIONARY, CYCLE	SEMI	3710H510032	2152	19950810	M7355	1155
2024835	STRETCHER, TRANSPORT	721	0103035106	2160	20010403	M7355	2297
2024836	STRETCHER, TRANSPORT	721	0103035107	2160	20010403	M7355	2297
2024862	EXERCISER, CROSSTRAINER	EFX556	6QC26N0004	2995	20010426	K61096	1301
1394358	DISPLAY UNIT, COLOR	DX15FG	HD3345081542	290	19960509	M7355	1108
1388287	PRINTER, ADP, LASER	M2680	D545119F39M	2310	19980602	M7355	3114

Statement of Work
Appendix 5

MISSION PLAN

MISSION PLAN
LIFE SCIENCES SERVICES CONTRACT
Index

Introduction

This Mission Plan describes the annual service deliverables to be provided by the Life Sciences Services Contractor over the life of the contract. The Contractor provides non-personal technical services to the Spaceport Engineering & Technology Directorate (YA), the International Space Station and Payload Processing Directorate (UB), the External Relations & Business Development Directorate (XA), the Space Shuttle Processing Directorate (PH), the Safety, Health & Independent Assessment Directorate (QA), and the Spaceport Services Directorate (TA) under the functional areas designated herein. The work is consistent with the John F. Kennedy Space Center Life Sciences roles and responsibilities and may occur at other geographic locations.

The Elements described in this Mission Plan require services that range from operating a variety of Government laboratories to providing scientific and engineering management of complex research and technology projects. The KSC operational mission and applied research permeate all work elements.

This is a Cost-Plus-Award-Fee / Performance Fee (CPAF/PF) performance-based Mission Plan. During the budget process each year the Government and the Contractor will partner performance areas that specifically define the mission plan deliverables and milestones within the budget constraints. The goal of this mission plan will always be to provide:

- Medical planning for shuttle launch and landing activities
- Health protection and emergency medical care for the astronauts and family members
- Ecological program implementing KSC's regulatory responsibilities and demonstrating environmental stewardship
- Biological science technical insight and development skills at the launch and landing site assuring science credibility
- Processing skills and facility/lab readiness and certifications for biological missions assuring critical-path readiness
- Health and safety initiatives protecting the general public and workforce

Mission Plan Operation

The plan is intended to be a living document throughout the life of the contract. It is used to allocate resources within the contract in response to technical requirements, mission schedules, and budget parameters. The mission plan element review will be primarily on an annual budget schedule. Adjustments to milestones, deliverables, and performance objectives may be made during the review process or during the operating year as needed to support customer requirements. All element adjustments are within the scope of the contract, and are not intended to result in or effect a change to the estimated cost or fee for the basic contract period or any of the option periods.

The key elements of each mission element are the description of the activities to be performed, the milestones where appropriate progress can be observed, the items to be delivered, and the cost phasing plan for the available budget. The descriptions will remain largely unchanged from year to year but the milestones, deliverables, and budget will vary. The overall budget value will closely align with the contract value unless a contract change is initiated.

Variations to the existing elements or the addition of new elements may occur during the Fiscal Year as new requirements change the focused activities. Revisions to the Mission Plan will be handled as described in Article C-2 of the contract.

Annual Schedule

Date	Activity	Contractor Action	Government Action
March 1	The Government reviews the mission plan with the contractor to ensure that it understands the performance objectives to be accomplished within the budget parameters for the next period.	X	X
March 20	Define and submit initial cost phasing plans for each Mission Element for the coming fiscal year	X	
March 21 - June 15	Negotiate with fund source managers to obtain necessary funding		X
June 30	Receive new obligation projections for mission elements		X
June 30	Contractor re-evaluate current end-of-year cost projections	X	
July 1	Begin preparations of any necessary adjustments to Mission Element milestones, deliverables, and performance objectives		X
August 1	Begin discussions of Mission Element adjustments and cost phasing plans	X	X
September 10	Complete discussions of Mission Element adjustments and cost phasing plans	X	X
September 15	Contractor submits final cost phasing plan. Sign-off process begins.	X	X
September 28	Complete signature process		X
October 1	Begin performance	X	

Annual Shuttle Mission plans are found at the following web sites:
http://sspweb.jsc.nasa.gov/ntdata/ssp/webdata/mchome/index.htm

Element One Project/Program Management

A. Project and Program Management

Provide the following management functions in accordance with SOW 1.0:

A1 Management Reviews - Conduct review of all technical requirements in Section J, including appendices, and update as necessary.
A2 Business Management
A3 Safety, Reliability, Maintainability & Quality Assurance
A4 Environmental Compliance
A5 Procurement Management
A6 Documentation and References
A7 Public Affairs

B. Level of Activity

1. Milestones (defined annually on Mission Element form)
2. Deliverables (defined annually on Mission Element form)
3. Budget (defined annually on Mission Element form)

A. Title: Facilities and Laboratories Utilization (See SOW 2.0)

Facilities and Laboratory Utilization is divided into sections that define the facilities, the laboratories, the operation, and computer support. The facility section describes the physical buildings and refers to the activation and operation of the Spaceflight Experiment Research and Processing Laboratory. The laboratories section describes the physical labs and applicable contractor activities required to run these labs. This section is intended to describe the support activities in operating the laboratories. Research activity conducted by the contractor is covered in sections 3 through 6 of the SOW. The Support Operations section describes the contractor responsibilities to support ground research and flight experiment processing in the laboratories. The contractor is tasked to accumulate data from a variety of sources and to ensure that all requirements are understood and documented.

A1. Facility Utilization

Facilities and laboratories utilized under the terms of this contract are located at the O&C Building (Building M7355) on KSC, and BOSU (Building 49635) and Hangar L and Little L (Building 1732) on CCAFS. By 2004 – 2005, the Hangar L facility equipment will be moved to the Space Experiments Research and Processing Laboratory (SERPL) and the Hangars L facilities will be vacated.

A2. SERPL Activation (See SOW 2.1.2)

The SERPL will be activated utilizing contractor support in all phases of the activity per SOW 2.1.2. The contractor shall support planning and assist in the formulation and execution of SERPL activation.

A3. Clinical Laboratories (See SOW 2.2.1)

The Clinical Laboratory provides the capability to perform clinical chemistry, hematology, urinalysis, and other specialized studies (e.g., hormonal assays via RIA). The laboratory provides support to Shuttle medical operations activities, especially those related to launch and landing, for flight crew, prime crew contact, contingencies, etc. The Contractor also interfaces with JSC laboratory personnel in the provision of launch and landing support. The Contractor also provides laboratory support to activities in the physiological stress laboratory.

A4. Analytical Laboratories (See SOW 2.2.2)

The contractor shall maintain analytical chemistry and microbiological analysis capabilities to support all elements of the LSSC.

A5. Specialized Laboratories (See SOW 2.2.3)

The contractor shall maintain and operate the Specialized Laboratories.

A6. Experiment Support Laboratories (See SOW 2.2.4 and 2.5)

The contractor shall provide laboratory support to flight and ground research principal investigators (PIs), visiting scientists and other research and technical investigators to ensure appropriate laboratory capabilities are available.

A7. Environmental Laboratories (See SOW 2.2.5)

The contractor shall maintain and operate the Environmental Laboratories. Environmental Microbiology Laboratory - Analysis over 4000 water samples from KSC, CCAFS, and Patrick AFB per year

A8. Equipment Calibration and Maintenance (See SOW 2.3)

The contractor shall assure calibration and maintenance support for all laboratory instrumentation, and shall maintain calibration and repair records for each instrument IAW.

A9 Computer Resources (See SOW 2.4)

Computer equipment, software, and network connections will be provided to the Contractor as base support. The Contractor shall provide a method for international visitors to access the Internet exclusive of the KSC computer network. Review and update all web pages on an annual basis.

B. Level of Activity

1. Milestones (defined annually on Mission Element form)
2. Deliverables (defined annually on Mission Element form)
3. Budget (defined annually on Mission Element form)

Element Three Laboratory Support To Biological Programs

A-1. Laboratory Support To Biological Programs (See SOW 2.5)

The contractor is tasked with providing support to flight and ground investigators conducting experiments in contractor-supported facilities and laboratories as specified in Section 2.2.4 of the Statement of Work. Ground research will be primarily NASA/KSC-directed and conducted by the LSSC or research conducted by universities employees stationed at KSC. Experiments flying on the Space Shuttle and Space Station platforms (including human investigations with post-flight testing) will process through the Life Sciences facilities and laboratories. The level of activity is dependent upon several factors including launch rates, flight payload manifests, experiment cadres, and investigator requirements. Research-dedicated shuttle missions (such as SPACEHABs) may require a tremendous amount of LSSC resources. Space Station assembly flights typically require minimal support, whereas ISS utilization flights can be a significant effort. During flights, investigators may reside at KSC to conduct ground-control experiments in the laboratories.

Each experiment is typically assigned one general-purpose lab, although sharing of a lab may be required. Typical experiments involve the testing of animal or human subjects as well as other biological specimens. Animals are housed and cared for in the Animal Holding Rooms at Hangar L. Flight experiments that require testing human subjects are assigned laboratory space at the BDCF in the O&C Building. Experiments involving other biological specimens are assigned laboratory space in the LSSF. Complex experiments have an average laboratory dwell time of four months, and middeck experiments have an average laboratory dwell time of three weeks.

Outfit and furnish laboratories in accordance with section 2.2 of the SOW

B-1 Level of Activity

Flight Activities:

a. Jan 02 through Sept 02
   i. Reference Shuttle FAWG Manifest (http://sspweb.jsc.nasa.gov/ntdata/ssp/webdata/mchome/index.htm)
   ii. Reference ISS Assembly Sequence Rev. F-3
   iii. Reference ISS Increment Definition Requirement Documents

b. FY03
   i. Reference Shuttle FAWG Manifest
   ii. Reference ISS Assembly Sequence Rev. F-3
   iii. Reference ISS Increment Definition Requirement Documents

c. FY04-FY09
   i. 6 SSP Flights per year (4 MPLM to ISS)
   ii. Reference ISS Assembly Sequence Rev. F-3
   iii. Following launch of the Centrifuge Accommodation Module, 4 utilization flights will fly per year, with a maximum eighteen middeck locker equivalents of powered experiments. Two utilization flights (and corresponding ISS increments) per year are planned to have significant amounts of life sciences experiments (one with rodents/primary cell cultures, one with plants/aquatics).

1. Milestones (defined annually on Mission Element form)
2. Deliverables (defined annually on Mission Element form)
3. Budget (defined annually on Mission Element form)

Element Four Medical Students/Residents Training

A. Project: Medical Students/Residents Training (See SOW 3.1)

The program consists of lectures in various aerospace medicine topics, ranging from the hazards of ground operations to the physiological changes that take place during spaceflight. The Contractor schedules all, and provides some of the didactic lectures in Aerospace Medicine during this period. In the unique surroundings at KSC, participants see first hand the application of many aerospace principles not available elsewhere. There is also training available through our Occupational Health and Environmental Health Facilities. Participants are also expected to become involved in the medical operations associated with the launch and landing of the Space Shuttle. The student or resident will be well-grounded in all medical activities of the Space Center and their respective rationales. An introduction to sources of aerospace medical research data is also provided, with weekly "journal clubs" for which abstracts from the aerospace medical literature are prepared and presented. Participants also may carry out an independent project in a topic on which they work on throughout their stay. At the end of the rotation, an American Board of Preventive Medicine-type exam is given. The LSSC contractor coordinates the student schedule during this period, assuring appropriate rotations in Aerospace Medicine, Occupational Medicine, and Environmental Health. If the student elects to work on a project during the rotation, the Contractor assures the project's appropriateness, and monitors the student's progress. The Contractor provides input to the student's final grade. An average of 3 students rotate thru on an average of 4 week rotations continuously.
More information can be found at http://medical.ksc.nasa.gov/education/intro.html

Critical Skills: Physician & nurse support

B Level of Activity

1. Milestones (defined annually on Mission Element form)
2. Deliverables (defined annually on Mission Element form)
3. Budget (defined annually on Mission Element form)

A Fundamental Biology Outreach

A-1 Program Management Support (SOW 3.2.1)

Provide the NASA FBOP Program Manager science expertise to assist with verifying the science accuracy of the FBOP's products (publications, web sites, videos, teacher kits, etc.) prior to their usage.

Provide inventory management of FBOP material at KSC and respond to all requests for information from private citizens, teachers, students, and space program employees (including other FBOP team members and NASA administrators). Ensure the appropriate types and quantities of information are used to satisfy all requests in a timely manner.

Strategically define opportunities for synergy within other LSSC primary functions and other FBOP projects.

A-2 Project Implementation "Spaceflight and Life Sciences Training Program and the Life Sciences Educators Network" (SOW 3.2.2)

The Spaceflight and Life Sciences Training Program provides six-weeks of intensive study at the Kennedy Space Center each summer to a select group of between 24 and 40 undergraduate students. An Academic Partner, currently Tuskegee University, performs student recruitment and screening, and provides students with academic guidance, college credit, housing and transportation. The SLSTP Curriculum is typically composed of 40 lectures; 12 hours of tours, six hours of demonstrations; 120 hours per student of laboratory project work in one of four project topic areas; three to four workshop sessions; and eight hours of situational exercises for team building. Laboratory projects allow students to participate in real research activities and contribute to on-going projects at KSC in the areas of plant space biology, flight experiments, and ecological programs. Students are required to prepare presentations on their work and discuss their progress at regularly scheduled sessions to keep all students up to date on SLSTP activities.

The Life Sciences Educators Network provides Life Sciences ground and flight research information and related outreach material to approximately 25 network participants.

B Level of Activity

1. Milestones (defined annually on Mission Element form)
2. Deliverables (defined annually on Mission Element form)
3. Budget (defined annually on Mission Element form)

A. Environmental Monitoring (See SOW 4.1.1)

A-1: Ecological/environmental Monitoring program support

Conduct surveys of the threatened and endangered species identifying any behaviors, territorial size by telemetry tracking, reproductive capacity, and any unusual results such as significant changes in productivity, different location sites, and potential disease problems. Survey work will utilize low altitude flights, field investigations, and the use of Global Positioning System (GPS). Collect and report mortality figures, especially those related to roadkills, and any potential fatal diseases, such as the respiratory disease in gopher tortoises. Determine the root cause of significant mortality rates, such as currently noticed for horseshoe crabs and immature marine turtles. Identify significant habitat characteristics for threatened and endangered species. Define suitability of various habitats to sustain populations of these threatened and endangered animals.

Operate and maintain ecological sampling sites for monitoring the atmosphere for criteria pollutants and selected pollutants in surface and ground water. Monitor NASA launch, including shuttle and unmanned vehicle launches off Cape Canaveral, both near field and far field for environmental impacts. Monitor selected NASA industrial activities for potential impacts per CO direction.

Determine effects of water level, salinity, and fire on the local ecology. Place significant emphasis on understanding fire ecology.

Establish and update vegetation databases. Continue to develop predictive models in conjunction with this research effort.

Initiate research to establish wetlands characteristics to support a recent decision to reestablish connection with the wetlands in the Indian River Lagoons.

Maintain the necessary ecological data so environmental assessments can be completed.

Utilize low-altitude and satellite remote sensing, along with various historical photographs to determine prior land use and current community structure.

Provide microbiological analyses to determine the total and fecal coliforms present in lagoon/river/estuarial waters. Provide microbiological environmental surveillance and investigations of KSC, CCAFS, and PAFB facilities and services.

Pursue other sources of revenues such as other federal agencies, state agencies, and private foundations to enhance the ecological research effort. This ecological program has the potential of drawing resources from several different organizations and utilizing the environs at KSC as a test-bed.

A-2: Principal Center for Recycling and Affirmative Procurement
Purpose:

Work under a NASA Headquarters and the Kennedy Space Center (KSC) agreement, performing tasks as the Principal Center for Recycling and Affirmative Procurement.

Responsibilities:
The contractor will conduct assistance visits to three NASA Center's Recycling and Affirmative Procurement programs per year. The contractor personnel will assist in the preparation of documentation and guidance in these program areas.

The Principal Center for Recycling and Affirmative Procurement provides leadership and expertise in Recycling and Affirmative Procurement throughout NASA's Centers by incorporating the pollution prevention hierarchy of source reduction, and recycling/reuse. This program will be carried out through compliance with E. O 13101, the NASA Implementation Plan and NPG 8830.1.

A-3: Remediation Support to Environmental Program Branch

Provide technical support to the NASA Remediation Group in the Environmental Program Branch (EPB). Contacts include NASA EPB engineers and specialists, EPB remediation contractors, EPA regulators and contractors, Florida Department of Environmental Protection (FDEP) regulators and contractors and others. Requirements include: (1) support to regulatory meetings (generally held monthly), (2) production of maps required for remediation projects/reports - this support may be requested by contractors working for NASA EPB, (3) support to KSC Baseline Study to ensure regulatory and EPB requirements are met, and (4) manage investigative derived wastes generated by remediation contractors.

B. Level of Activity:

1. Milestones (defined annually on Mission Element form)
2. Deliverables (defined annually on Mission Element form)
3. Budget (defined annually on Mission Element form)

A. Environmental Ecological Studies (SOW 4.1.2)

The Contractor shall conduct surveys of flora and fauna at selected sites to identify and evaluate Center ecosystems.

Perform biological assessments and preliminary biological assessments for all projects that may impact threatened and/or endangered species or their habitats. Assessments are performed in a manner that satisfies the requirements under Section 7 of the Endangered Species Act. Ecological risk assessments are also performed in support of the RCRA Facility investigations. Assessments are accomplished according to U. S. Environmental Protection Agency and State criteria. The Contractor will be expected to explain/defend the technical conclusions of the assessments with the appropriate regulatory authorities when required and publish research findings in nationally and internationally known peer reviewed publications. Such activities will include:

Define habitat of endangered species. Evaluate wildlife issues associated with construction, facility siting, and right of ways. Monitor sea turtle nesting success, population trends and densities, as well as lighting impacts. Conduct long term ecological monitoring of species-at-risk: gopher tortoise, manatees, sea turtle, indigo snakes, wading birds, scrub jays, etc. Conduct investigations into long-term sea-grass and terrestrial vegetation and carbon dioxide site research. Some of these studies are conducted in cooperation with the Smithsonian Institution, Sea World of Florida, Inc., and Hubbs Marine Institute.

A-1: Scrub Habitat Restoration Program Monitoring

Provide continuation of field monitoring and scrub habitat evaluation studies in support for the KSC Scrub Habitat Restoration Program.

A-2: Scrub Jay Model

Develop a spatially explicit population model for Florida scrub jays adapted to the specific needs of Kennedy Space Center/Merritt Island National Wildlife Refuge (NWR). In particular, the model is to handle multiple GIS layers representing temporal changes in landscapes associated with Environmental Impact Statement (EIS) scenarios. These GIS layers will be linked back to the demographic performance of scrub jays within affected areas, providing a quantitative framework for evaluating impacts.

A-3: Vandenberg Threatened and Endangered Species

NASA launch operations at SLC-2, Vandenberg Air Force Base (VAFB) have been linked to impacts to California Least Terns and Western Snowy Plovers. Concerns exist as to the extent of the impact of launch operations on these species of concern. A population viability assessment (PVA) of the Least Terns and Snowy Plovers will be conducted to understand the impact of operations and to ensure any mitigation will have the maximum positive result. This will include study of plausible population responses

and quantitative objectives towards science-based monitoring and population management. These activities will be performed by teaming and subcontracting with recognized scientific experts on population modeling, California Least Terns, Western Snowy Plovers, and predation management. Workshops will be conducted to develop subtasks specific to Least Tern PVA, Snowy Plover PVA, and alternative population recovery actions on VAFB.

A-4: Wetlands Restoration Program Monitoring

Provide continuation of field monitoring and wetlands evaluation studies in support for the KSC Wetlands Restoration Program.

B. Level of Activity:

1. Milestones (defined annually on Mission Element form)
2. Deliverables (defined annually on Mission Element form)
3. Budget (defined annually on Mission Element form)

A. Fundamental Biology Research Program Payload Development

KSC manages approximately 15 payloads/experiments at various stages of development (definition through post-flight analysis). These payloads are generally one or two middeck locker equivalents. Some payloads may have multiple investigators, however, the majority have one investigator from an academic institution. The life-cycle for experiments range from 3 to 6 years in duration. The complexity ranges from simple non-powered experiments, to more-complex powered experiments required to maintain living organisms and potentially chemically or thermal fixate during flight.

Projects:

i. BRIC-14
Develop flight experiment – "Development of Gravity Sensitive Plan Cells, *Ceratodon*, in Microgravity" in accordance with SOW 4.2.1. Experiment will utilize BRIC-LED modified re-flight hardware and is manifested to fly on STS-107.

ii. BioTube/MFA
Develop flight experiment - "Applications of Physical and Biological Techniques in the Study of Gravisensing and Response System of Plants" in accordance with SOW 4.2.1. Experiment will fly on STS-107 using new hardware.

iii. TAGES-2 (Short Duration Flight and Long Duration Flight)
Develop flight experiment –"Transgenic Plant Biomonitors of Space Flight Exposure" in accordance with SOW 4.2.1. Experiment will be conducted on an SSP flight using new PGF-split plenum hardware and on ISS flight using MCS or PGF-SP hardware.

iv. RASTA
Develop flight experiment - "Growth and Development of Raphanus Sativus in Microgravtiy" in accordance with SOW 4.2.1. Experiment will fly on SSP mission using re-flight PGF-split plenum hardware.

v. FERNS
Develop flight experiment – "Early Development of Fern Gametophytes in Microgravity" in accordance with SOW 4.2.1.

vi. BRIC-15
Develop flight experiment – " Gravity Induced Changes in Gene Expression During Cotton Fiber Development" in accordance with SOW 4.2.1.

vii. PESTO
Develop flight experiment – " Gravity Induced Changes in Gene Expression During Cotton Fiber Development" in accordance with SOW 4.2.1. Experiment will fly on ISS using Biomass Production System hardware.

viii. PASTA
Develop flight experiment – "Photosynthesis and Metabolism of Superdwarf Wheat in Microgravity" in accordance with SOW 4.2.1. Experiment will fly on SSP mission using Biomass Production System hardware after the PESTO mission.

ix. Future Projects
Develop SSP and ISS payloads (ref. Table 8.1)

1. Milestones (defined annually on Mission Element form)
2. Deliverables (defined annually on Mission Element form)
3. Budget (defined annually on Mission Element form)

Table 8.1 Fundamental Biology Research Program Payload Development

Platform	Experiment Name (Payload/Hardware)	Start Date	Flight Date	Termination Date
SSP-RM	BRIC-14 (BRIC-LED)	3/99	4/02	4/03
SSP	PASTA (BPS)	1/97	12/03	12/04
SSP-RM	BioTube (Mag. Field App.)	10/96	4/02	4/03
SSP	RASTA (PGIM)	2/99	9/03	9/04
SSP	TAGES-2 (PGIM-Split Plenum)	10/99	3/03	3/04
SSP-RM	FERNS (GN2 Freezer/TBD Centrifuge)	7/00	2/03	2/04
SSP-RM	Cotton (BRIC-15)	8/00	2/03	2/04
SSP	SSP TBD (TBD)	3/02	3/05	3/06
SSP	SSP TBD (TBD)	10/03	10/06	10/07
SSP	SSP TBD (TBD)	10/03	10/06	10/07
SSP	SSP TBD (TBD)	10/04	10/07	10/08
SSP	SSP TBD (TBD)	10/04	10/07	10/08
SSP	SSP TBD (TBD)	10/05	10/08	10/09
SSP	SSP TBD (TBD)	10/05	10/08	10/09
SSP	SSP TBD (TBD)	10/06	10/09	10/10
SSP	SSP TBD (TBD)	10/06	10/09	10/10
SSP	SSP TBD (TBD)	10/07	10/10	10/11
SSP	SSP TBD (TBD)	10/07	10/10	10/11
SSP	SSP TBD (TBD)	10/08	10/11	10/12
SSP	SSP TBD (TBD)	10/08	10/11	10/12
SSP	SSP TBD (TBD)	10/09	10/12	10/13
SSP	SSP TBD (TBD)	10/09	10/12	10/13
SSP	SSP TBD (TBD)	10/10	10/13	10/14
SSP	SSP TBD (TBD)	10/10	10/13	10/14
ISS	PESTO (BPS)	1/97	1/02	3/03
ISS	TAGES-2 (MCS)	10/99	1/04	3/05
ISS	ISS TBD (TBD)	10/04	10/07	12/08
ISS	ISS TBD (TBD)	10/05	10/08	12/09
ISS	ISS TBD (TBD)	10/06	10/09	12/10
ISS	ISS TBD (TBD)	10/07	10/10	12/11
ISS	ISS TBD (TBD)	10/08	10/11	12/12
ISS	ISS TBD (TBD)	10/09	10/12	12/13
ISS	ISS TBD (TBD)	10/10	10/13	12/14

Element 9 Advanced Human Support Technology Payload Development

A. Advanced Human Support Technology Payload Development

Projects:

i. WONDER
Develop flight experiment –"Development of a Microgravity-Rated Hydroponic Plant Culture Apparatus" in accordance with SOW 4.2.1.

B. Level of Activity (see Table 9.1)

1. Milestones (defined annually on Mission Element form)
2. Deliverables (defined annually on Mission Element form)
3. Budget (defined annually on Mission Element form)

Table 9.1
Advance Human Support Technology – Advance Life Support Program

Platform	Experiment Name (Payload/Hardware)	Start Date	Flight Date	Termination Date
SSP-RM	WONDER (PTIM – PGBA)	7/99	3/03	3/04
SSP	Bingham (TBD)	10/01	10/04	10/05
SSP	SSP (TBD)	10/03	10/06	10/07
SSP	SSP (TBD)	10/05	1/08	1/10
SSP	SSP (TBD)	10/07	10/10	10/11
SSP	SSP (TBD)	10/09	10/12	10/13
ISS	ISS (TBD)	10/04	10/07	12/08
ISS	ISS (TBD)	10/06	10/09	12/10
ISS	ISS (TBD)	10/08	10/11	12/13
ISS	ISS (TBD)	10/10	10/13	12/14

Element Ten Ground Research and Spaceport Technology Development

A. Ground Research and Spaceport Technology Development

A-1. Systems Integration and Evaluation

The Contractor shall propose and conduct research in Systems Integration and Evaluation IAW SOW 4.2, 4.2.2 and 4.2.2.1.

The contractor shall conduct research investigating growth of single crops under various conditions of atmospheric closure and recycling of various constituents and to investigate multi-cropping methods, biomass conversion processing, and the introduction of nutrients generated from treatments of the inedible biomass.

These tests shall provide a database of plant growth chambers operational modes, plant growth and biomass processing requirements, and resource recycling optimization options. The Contractor shall collect sufficient data to describe the mass flows, energy use, chamber operations, chemical and microbiological contaminants, and physical parameters.

A-2. Biomass Production

The contractor shall conduct research that will evaluate horticultural techniques and environmental responses for a wide range of crops and other photosynthetic organisms IAW SOW 4.2.2.2.

A-3. Resource Recovery

The contractor shall develop and test bioreactors that will extract soluble minerals, carbon dioxide and water from inedible biomass for recycling to crops IAW SOW 4.2.2.3.

A-4. Biological Response to Closed Systems

The contractor shall conduct research in the biological response in closed environmental systems IAW SOW 4.2.2.4.

A-5. Molecular Biology

The Contractor shall propose and conduct research in areas of Molecular Biology that support closed biological systems, advanced bioregenerative life support systems, fundamental space biology and bioregenerative resource recovery research and investigations IAW SOW 4.2.2.5.

A-6. Animal Space-flight Programs

The contractor shall assist in the development and operation of the KSC Animal Spaceflight Programs research in animal husbandry and animal care IAW SOW 4.2.3.

B. Level of Activity:

A-1: The contractor shall conduct from five to fifteen independent research investigations in systems integration and evaluation ongoing continuously in the KSC laboratories.

A-2: The contractor shall conduct from five to fifteen independent research investigations in biomass production ongoing continuously in the KSC laboratories.

A-3: The contractor shall conduct from five to fifteen independent research investigations in resource recovery ongoing continuously in the KSC laboratories.

A-4 The contractor shall conduct from five to fifteen independent research investigations in biological responses to closed systems ongoing continuously in the KSC laboratories.

A-5 The contractor shall conduct from five to fifteen independent research investigations in molecular biology ongoing continuously in the KSC laboratories.

A-6 Jan 02 – Sept 02: Assist NASA Program Manager in the development of the Animal Spaceflight Program.
FY 03: Continue to assist in the development of program activities and initiation of research activities.
FY 04 – FY05: SERPL is activated. Assist in the transition of the KSC Animal Spaceflight Program activities to the new facilities. Continue research activities during transition.
FY06 – FY 09: Assist in research activities and KSC Animal Spaceflight Program activities.

1. Milestones (defined annually on Mission Element form)
2. Deliverables (defined annually on Mission Element form)
3. Budget (defined annually on Mission Element form)

A. **Space-flight Medical Support (See SOW 5.1, 5.1.1 thru 5.1.4)**

This is a multifaceted responsibility that includes the following:

1. Evaluating the placement of personnel at KSC during Shuttle operations, particularly launch and landing. These personnel include flight crew, Shuttle support personnel (including medical and fire rescue), other KSC workers, and visitors and guests. Based upon the numbers and locations of these groups at KSC, recommend the appropriate numbers, skill mix, and placement of emergency medical support personnel. In the event of a contingency, determine appropriate movement of medical personnel and injured individuals, and direct that movement. Provide medical care as necessary.

2. Planning, maintaining facilities and equipment, and providing medical support to all direct and indirect flight crew related activities at KSC (and, where appropriate, at other facilities for which KSC has prime responsibility).

During aspects of this support, there are interfaces with other organizations including other directorates and contractors at KSC, local area hospitals, the DOD, JSC Flight Medicine and their support personnel, and medical principal investigators.

Planning

The Contractor assists in all areas of Space-flight Medical Operations planning and document preparation. Emergency medical services' planning is a critical element in launch and landing medical operations. The JSC Medical Operations Requirement Document (MORD) levies the generic requirements in this area. The overall KSC medical plan is documented in the KSC Medical Operations Support Implementation Plan (MOSIP), which is updated periodically as needed. The specific plan outlining the response to a Shuttle medical contingency is detailed in the KSC Emergency Medical Services Plan (EMS Plan), which is updated annually. Each individual mission has a launch and landing package, which outlines specific details of that mission.

In addition to the document preparation and planning associated with Space Shuttle flights, the Contractor supports planning for emergency exercises and simulations and medical training.

Support associated with these planning activities is detailed below.

Space Shuttle Medical Support (including Crew Medical Care)

The Contractor assists in all areas of Space Shuttle Medical support, helps to monitor and assure the appropriate implementation of the planning activities outlined above, and participates in emergency exercises and simulations, and in medical training activities. This participation can be as a simulated victim, a medical care provider, a facilitator, an evaluator, an observer, and/or a member of the medical support personnel (e.g., EMS or KMD). During Shuttle launch and landing activities, the Contractor provides medical support. While the particular coverage responsibilities vary from launch to launch, the Contractor support can include, but is not limited to, that of "EMS", "KMD", "KRN" and medical technologist. The specific responsibilities of these personnel are provided in more detail in the documents cited above. While these services should not duplicate or

interfere with dedicated emergency medial support furnished by the J-BOSC under its WBS 1.5.1 for launch and landing operations, in the event of an actual contingency, all medical forces available will be utilized as necessary to provide medical care to ill or injured crew members, KSC workers, guests, and visitors.

Prior to launch, and immediately after landing, the Contractor personnel support the JSC Flight Medicine personnel. This includes support to the pre- and post-flight crew physicals, preflight Prime Crew Contact physicals, and medical monitoring for all Life Sciences Flight Experiments Program human experiments. The Contractor also supports the laboratory personnel who conduct these human experiments on-site.

The Contractor maintains the facilities to support this work, which include physical examination facilities in the physiological stress laboratory, the Baseline Data Collection Facility, and the Crew Examination Facility. The Contractor maintains medications and the emergency medical crash carts located in these facilities, as well as similar medical provisions for the Crew Transport Vehicle and the portable helicopter kits.

The Contractor maintains the capability to provide basic first aid, Basic Life Support, and Advanced Cardiac Life Support (according to American Heart Association Standards) as necessary and appropriate in all responsibilities outlined above.

KSC Space Flight Medical Support Training Course

The KSC Space Flight Medical Support Training Course is provided annually to certain medical personnel in the local community who might provide on-site medical care at KSC and/or would be likely to receive ill or injured KSC personnel. This training familiarizes them with the local KSC area and provides them with training on diagnosis and treatment of problems peculiar to Shuttle scenarios (e.g., Hypergols, nitrogen tetroxide, dysbarisms, zero-g deconditioning). The Contractor arranges all logistics associated with the course and plans and teaches the course.

Shuttle/International Space Station Biomedical Operations

Plan, develop, support and implement the plans and activities for routine and emergency medical support to Space Shuttle launch and landing activities and Space Station pre-, in-, and post-flight activities, by medical, nursing, rehabilitation and laboratory personnel and associated facilities. Coordinate personnel, resources and equipment readiness and deployment with TA, YA, J-BOSC, DOD, JSC, and off-site medical support personnel. Coordinate medical training, scheduling, and logistics activities for the annual KSC Spaceflight Medical Support Training Course.

Critical Skills: Aerospace physicians, clinical nursing specialists, and medical technologists

B. Level of Activity:

Jan 02 – Sep 02: 5 Launch & landings forecasted along with 1 Spaceflight Medical Support Training Course.
FY 03: 8 Launch & landings forecasted with one training course.
FY 04-FY 09: Approximately 6-8 launch & landings forecasted with one training course each year.

1. Milestones (defined annually on Mission Element form)
2. Deliverables (defined annually on Mission Element form)
3. Budget (defined annually on Mission Element form)

Element Twelve Crew, Workforce, and Planetary Protection

A. Title: Crew, Workforce, and Planetary Protection (See SOW 5.2)

A-1: Microbiological Sampling

Provide microbiological sampling support to pre-, in-, post-flight and fly back samples for the Space Shuttle and Space Station systems. Evaluate facilities to accommodate medical support to pre- and post-flight activities for long duration (ISS) crewmembers.

A-2: Advanced Protective Apparatus

Provide medical support to the biomedical laboratory for the qualification and use of human subjects during the development of advanced forms of breathing apparatus and suits. After qualification, medical support is required during the performance of lab, environmental chamber and field studies as specified by the Institutional Review Board (IRB). This support shall include physician, nurse, and clinical laboratory specialties Also, provide assistance with acquisition and scheduling of test subjects. Finally, provide purchasing of instrumentation, hardware, and supplies supporting this project.

Critical Skills:

A-1: Micro, toxicological, chemistry lab skills
A-2: Physician, nurse, and clinical lab specialists support.

B. Level of Activity:

- Jan 02 – Sep 02: 5 Launch & landings forcasted.
- FY 03: 8 Launch & landings forcasted.
- FY 04-FY 09: Approximately 6-8 launch & landings forecasted.

1. Milestones (defined annually on Mission Element form)
2. Deliverables (defined annually on Mission Element form)
3. Budget (defined annually on Mission Element form)

Element Thirteen Physical Fitness and Health Awareness/Musculoskeletal Rehabilitation and Preventive Medicine
(See SOW 5.3, 5.4)

A. Title: Physical Fitness and Health Awareness/Musculoskeletal Rehabilitation and Preventive Medicine (See SOW 5.2)

A-1 Physical Fitness and Health Awareness/Musculoskeletal Rehabilitation Program

The Contractor oversees the activities of the Physical Fitness and Health Awareness Program.

The Contractor operates the two exercise facilities. These facilities contain aerobic equipment (e.g., treadmills, exercycles, stair machines, and ski machines), machine weight equipment, free weights, and mat areas. The Contractor is expected to monitor the facility and equipment, provide advice for new or replacement equipment, as appropriate, and provide routine equipment maintenance. The Contractor also monitors the personnel using the equipment to assure proper use in order to minimize the possibility of injury to the users or damage to the equipment.

The Contractor provides fitness assessments to facility clients, and advises them on an appropriate exercise program to help them achieve their fitness goals. The Contractor provides periodic updates on fitness. The Contractor provides and promotes motivational programs to improve the health of the workforce, such as the KSC Intercenter Run and Employee Fitness Day, both to encourage more participation in the use of the facilities and to encourage participants to exercise to their potential.

The Contractor provides classes in various exercise areas, such as aerobics, muscle strengthening, and special fitness (e.g., abdominal classes, upper body strength).

The Contractor encourages and promotes general health awareness. This includes such areas as nutrition. The Contractor participates in Centerwide programs such as the Annual KSC Health Fair and the KSC Back Injury Reduction Initiative. The Contractor shall strive for new and innovative ways to provide general health awareness. In concert with the J-BOSC Health Education Program, the Contractor advertises and/or coordinates Smoking Cessation classes, the provision of appropriate health literature, and other wellness initiatives.

Both exercise facilities operate from 5:30 a.m. - 7:00 p.m., M-F.

Rehab facility operates from 7:00 a.m. – 5:00 p.m., M-F

A-2. Project: Preventive Medicine, Health and Microbiological Surveillance.

Contribute to the safety and health of the Kennedy Space Center (KSC) and Cape Canaveral Air Force Station (CCAS) personnel through the administration, planning, and implementation of the health promotion and education activities of the KSC Fitness Centers. Provide health promotion, education and musculoskeletal rehabilitation through the KSC RehabWorks Program.

Critical Skills: Certified/Licensed Athletic Trainers,
Fitness Specialists & Technicians,
Physiologist for stress lab,
Physician and Nurse support,
Microbiological Lab Tech

B. Level of Activity (Expected to remain fairly consistent over the life of the contract)

Fitness Center
- Support over 90,000 employee visits per year
- Conduct over 3000 personal training appointments per year
- Conduct over 350 body fat assessments per year

Rehab Facility
- Provide services to over 700 patients with over 2500 visits per year
- Conduct over 25 worker-training classes per year

1. Milestones (defined annually on Mission Element form)
2. Deliverables (defined annually on Mission Element form)
3. Budget (defined annually on Mission Element form)

A. Title: Agency Occupational Health (See SOW 6) (Include this description on Mission Element form)

The contractor is expected to be proactive and innovative in making recommendations for programmatic development.

A-1: Occupational Health Program Assessment

The Contractor shall provide expertise to the Agency Occupational Health Program Office during its assessment and documentation of the present status of NASA's Occupational Health Program (OHP). This service requires personnel possessing the requisite knowledge and experience in occupational medicine (physicians and nursing) and environmental health (industrial hygiene). The NASA program office is required to perform a full-scale assessment of the status of all NASA centers' implementations of the Program with appropriate reporting to, and liaison with, the NASA Headquarters overseeing officials. The program office assessment includes, at a minimum, site visits to each NASA center on a two year cycle; inventory and evaluation of facilities, resources, and practices at each center; essential data documentation and reporting; and individual center program evaluations.

The Contractor shall develop a quality management program, and develop occupational health initiatives, programs, and draft-policies. The Contractor shall develop methodology similar to accepted industry accreditation standards for quality management program for occupational medicine.

The Contractor shall make recommendations for enhanced future OHP operation and management.

Develop audit tool protocol and database for occupational health discipline programs, maintain data and generate reports per DRD.

A-2: Occupational Health Program Administration Management Support

The Contractor shall develop methodology similar to accepted industry accreditation standards for quality control plan for occupational medicine

The Contractor shall plan and coordinate the annual Occupational Health Meeting and other conferences

- Coordinate hotel accommodations and meeting room logistics
- Plan budget estimates and track costs
- Coordinate conference program and speakers with the OH Principal Center
- Prepare conference proceedings
- Routine status reporting to OH Principal Center

The Contractor shall coordinate the Agency's occupational health training program development

- Identification and prioritization of center training needs

- Development of a training program plan listing specific training initiatives and courses, including history of previous courses provided by the OH Principal Center
- Develop 3 year training plan for environmental health and occupational medicine

The Contractor shall support the Agency's program review process including pre-visit planning, logistical support, interaction with Center OHP and document each center visit.

The Contractor shall solicit, assimilate, integrate, and submit appropriate data for all required OH reports and review and comment on proposed regulations and industry standard/guidelines related to the Agency's OHP

The Contractor shall maintain and make enhancements to the Occupational Health Program web site and maintain security and operation of the server.

The Contractor shall develop, implement, and maintain an integrated NASA Health Information Management System database containing center specific data.

The Contractor shall serve as a technical resource for NASA centers for Agency Occupational Health Program policy, appropriate regulations, and for current best practices.

Critical Skills:

Physicians, nurse, and Industrial Hygienist

B. Level of Activity:

1. Milestones (defined annually on Mission Element form)
2. Deliverables (defined annually on Mission Element form)
3. Budget (defined annually on Mission Element form)

Use Excel File for Mission Element Development

The Next two pages are for exhibit only.

HELP

LSSC Mission Element Description Sheet

Element Title:

WO:

Element no. | Revision:

	name	title	signature/date
LSSC Proj Mgr			
LSSC WO Mgr			
LSSC Tech Lead			

Client:

UPN	Program	Fund
	Total Available Funding:	0

			name, title	signature/date
NASA Proj Mgr				
NASA WO Mgr		RMO:	W. Henderson, GG-C	
NASA Tech Lead		CTM:	M. Voska, YA-A	

Planned Total Funding:	0
Planned ODC Funding:	0
Planned Total WFE:	0.0

Description:

Milestones:

Date	Event

Deliverables:

Date	Item

		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Totals
Planned WFE (e.g.)														0.0
Actual WFE (e.g.)														0.0
Delta WFE (e.g.)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plan Labor Cost ($)														0
Act Labor Cost ($)														0
Delta Labor Cost ($)		0	0	0	0	0	0	0	0	0	0	0	0	0
Plan Non-Labor ($)														0
Actual Non-Labor ($)														0
Actual Non-Labor ($)		0	0	0	0	0	0	0	0	0	0	0	0	0
Plan Cum Total ($)		0	0	0	0	0	0	0	0	0	0	0	0	
Actual Cum Total ($)		0	0	0	0	0	0	0	0	0	0	0	0	
Actual Cum Total ($)		0	0	0	0	0	0	0	0	0	0	0	0	

Notes: - Labor costs include all labor plus (G&A and Fee)
- WFE to first decimal place (e.g. 10.3)

Legend:

Yellow - NASA to enter data	Gray - do not overwrite!, automatic calculation
Aqua - LSSC responsibility to enter data	Green - PM enter actuals each month

HELP

LSSC Mission Element Description Continuation Sheet

Project Title:

WO:

Element no.:

Revision:

Description:

Milestones:

Date	Event

Deliverables:

Date	Item

Legend:

Yellow - KASA to enter data

Aqua - LSSC responsibility to enter data

Statement of Work
Appendix 6

Acronyms

ACRONYMS

AAALAC	American Association for the Advancement of Laboratory Animal Care
AAF	Available Award Fee
ACLS	Advanced Cardiac Life Support
ADP	Automated Data Processing
AI	Artificial Intelligence
ALS	Advanced Life Support
ARC	Ames Research Center
ASCP	American Society of Clinical Pathologists
BCLS	Basic Cardiac Life Support
BDCF	Baseline Data Collection Facility
BOSU	Bioastronautics Operations and Support Unit
BSN	Bachelor of Science in Nursing
CAFB	Contract Award Fee Board
CAP	College of American Pathologists
CCAFS	Cape Canaveral Air Force Station
CCEMP	Consolidated Comprehensive Emergency Management Plan
CCTV	Closed Circuit Television
CDL	Commercial Drivers License
CEA	Center Export Administrator
CO	Contracting Officer
COTR	Contracting Officer's Technical Representative
CPAF/IF	Cost-Plus-Award-Fee / Incentive-Fee
DFRC	Dryden Flight Research Center
DMS	Department of Management Services (Florida)
DO	Doctor of Osteopathy
DRD	Data Requirements Deliverable
DRL	Data Requirements List
DSO	Detailed Supplemental Objective
DTO	Detailed Test Objective
DVM	Doctor Of Veterinary Medicine
EAR	Export Administration Regulations
ECR	Environmental Condition Report
EEC	Environmental Evaluation Console
EIS	Environmental Impact Statement
EMS	Emergency Medical Service
EO	Equal Opportunity
EPA	Environmental Protection Agency
EPO	Environmental Program Office
FAR	Federal Acquisition Regulations
FAWG	Flight Assignment Working Group
FBOP	Fundamental Biology Outreach Program
FDEP	Florida Department Of Environmental Protection
FDO	Fee Determination Official
FDOT	Florida Department of Transportation
FSRI	Florida Space Research Institute
FY	Fiscal Year

G&A	General and Administrative
GFE	Government Furnished Equipment
GIS	Geographic Information System
GPS	Global Positioning Center
GSA	General Service Administration
GSFC	Goddard Space Flight Center
HRS	Health and Rehabilitative Services
IACUC	Institutional Animal Care and Use Committee
IAW	In Accordance With
IOPs	Internal Operating Procedures
IRB	Institutional Review Board
IRIS	Incident Reporting Information System
ISO	International Organization for Standardization
ISS	International Space Station
IT	Information Technology
ITAR	International Trade in Arms Regulation
J-BOSC	Joint Base Operations Support Contract
JHB	Johnson Space Center Handbook
JSC	Johnson Space Center
KHB	Kennedy Space Center Handbook
KSC	Kennedy Space Center
LPS	Launch Processing System
LSSC	Life Science Services Contract
M.D.	Medical Doctor
MORD	Medical Operations Requirements Document
MOSIP	Medical Operations Support Implementation Plan
MPLM	Multi-purpose Logistic Module
NASA	National Aeronautics and Space Administration
NEMS	NASA Equipment Management System
NETS	NASA Environmental Tracking System
NFS	NASA FAR Supplement
NIH	National Institute of Health
NPD	NASA Policy Directive
NRA	NASA Research Announcement
NRC	National Research Council
NSTS	National Space Transportation System
O&C	Operations and Checkout Building
O&M	Operations and Maintenance
OHP	Occupational Health Program
OISD	Operations Intercom System Digital
OLAW	Office Of Laboratory Animal Welfare
PAFB	Patrick Air Force Base
PAMS	Permanent Air Monitoring Stations
PHS	Public Health Service
PI	Principal Investigator
POP	Program Operating Plan
PVA	Population Viability Assessment
PVT	Payload Verification Test
RCRA	Resource Conservation and Recovery Act

REEDM	Rocket Emission Exhaust Dispersion Model
RFP	Request for Proposal
RIA	Radioimmuno Assay
RM	Reliability and Maintainability
RM&QA	Reliability, Maintainability and Quality Assurance
SEMO	Supply and Equipment Management Officer
SERPL	Space Experiments Research and Processing Laboratory
SFA	Spaceport Florida Authority
SLSTP	Spaceflight Life Sciences Training Program
SOW	Statement of Work
SPF	Specific Pathogen-Free
SRM&QA	Safety, Reliability, Maintainability & Quality Assurance
SRR	Science Readiness Review
SSP	Space Shuttle Program
SVT	Science Verification Test
T&CD	Timing & Countdown
VAFB	Vandenberg Air Force Base
VPP	Voluntary Protection Program
WBS	Work Breakdown Structure
WFE	Workforce Equivalent

Life Sciences Facilities and Laboratories Identification

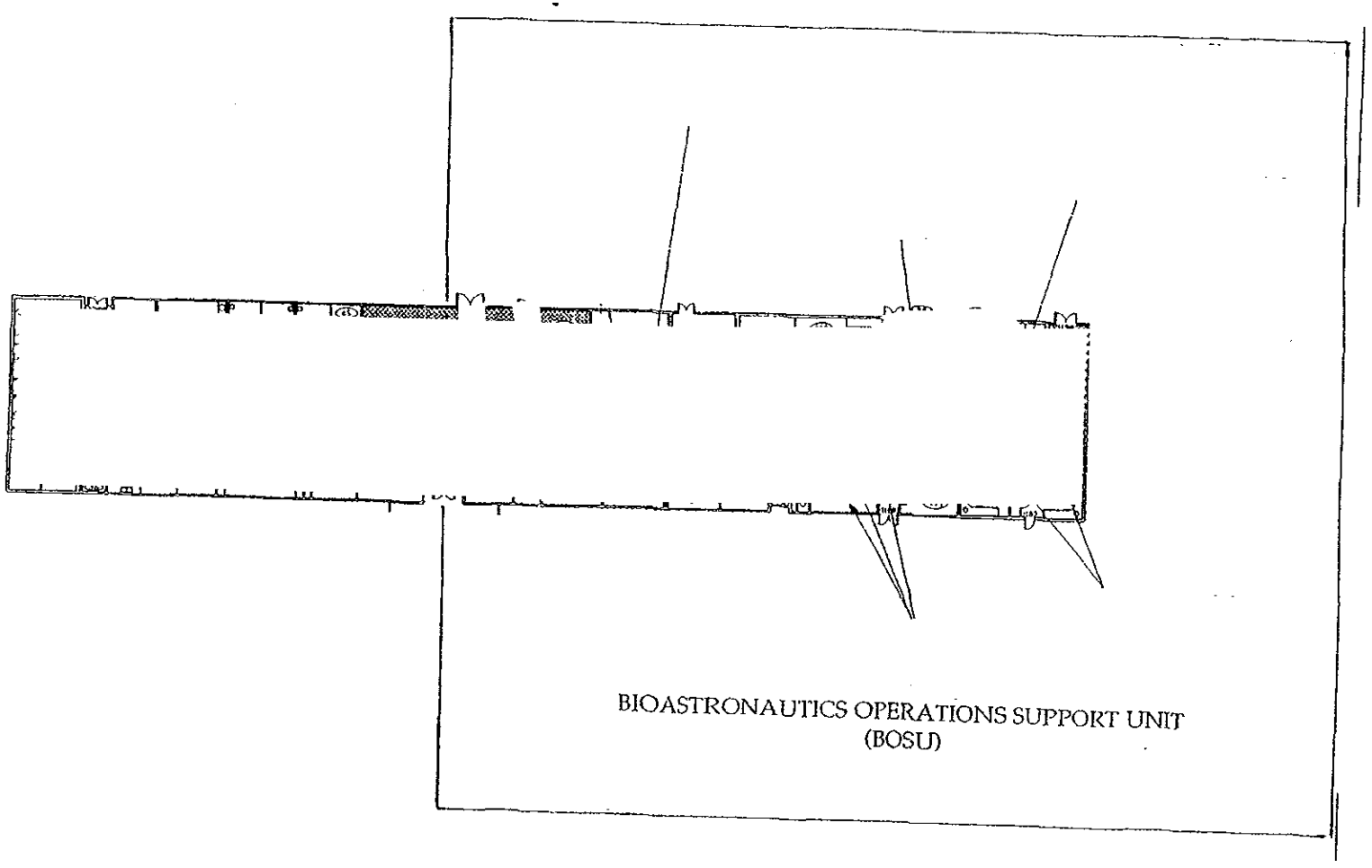
Section J

Appendix 7

SUMMARY OF KSC LIFE SCIENCES FACILITIES BY WBS

WBS	FUNCTION	BLDG	ROOM
2.2	Microbiology Laboratory	BOSU	Dedicated Facility * **
4.1	Geographic Information System Lab	O&C	3221 – 3227
4.2	Postflight Science Support Facility	Dryden	Dedicated Facility☐
4.2	AHST Support Laboratories and Payload Development	Hangar L Hangar L* L BOSU Outback	Dedicated Facilities * **
4.2	Biomass Production Chamber (BPC)	Hangar L	1-2 Floors NW * **
4.2	Experiments Monitoring Area	Hangar L	174 * **
4.2	Animal Holding Facility	Hangar L	Hangar L N * **
4.2	Payload Development / Flight Support	66235 CCAS	Dedicated Facility * **
5.1	Examination Rooms	O&C	3212 - 3289
5.1	Clinical Laboratory	O&C	3214
5.1	Physiological Stress Laboratory	O&C	3219
5.1	Baseline Data Collection Facility	O&C	2293, 2297, 2299
5.3	Exercise Facility	OSB	OSB 1st SE **
5.3-4	Exercise Facility and Rehab Works	O&C	O&C 1st NE **
6.0	Agency Occupational Health	HQ	3506, 3510
ALL	SERPL	SERPL	Dedicated Facility (Under Construction)

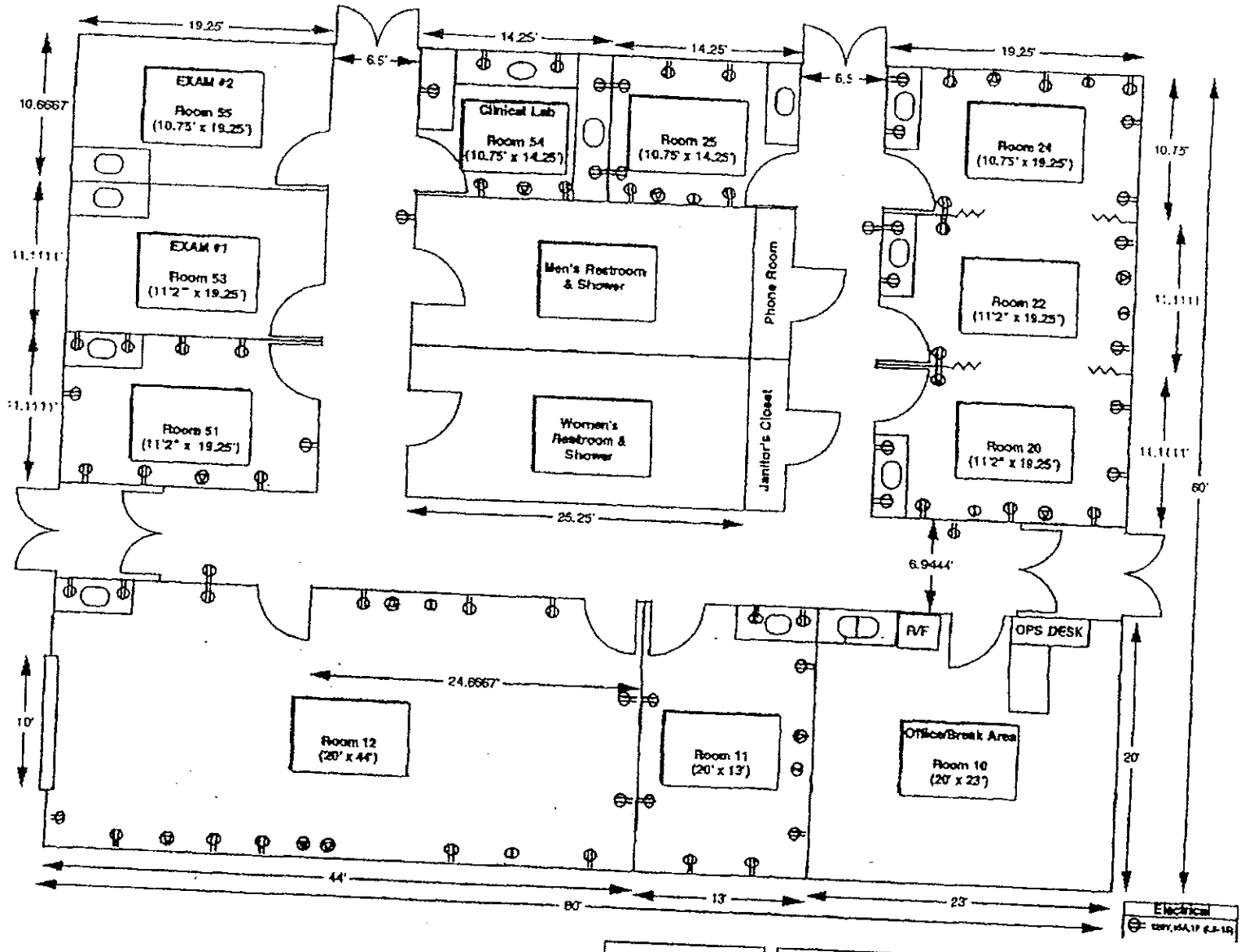
* These facilities will move to SERPL during 2004.
** See floor plans for room number details.



BIOASTRONAUTICS OPERATIONS SUPPORT UNIT
(BOSU)

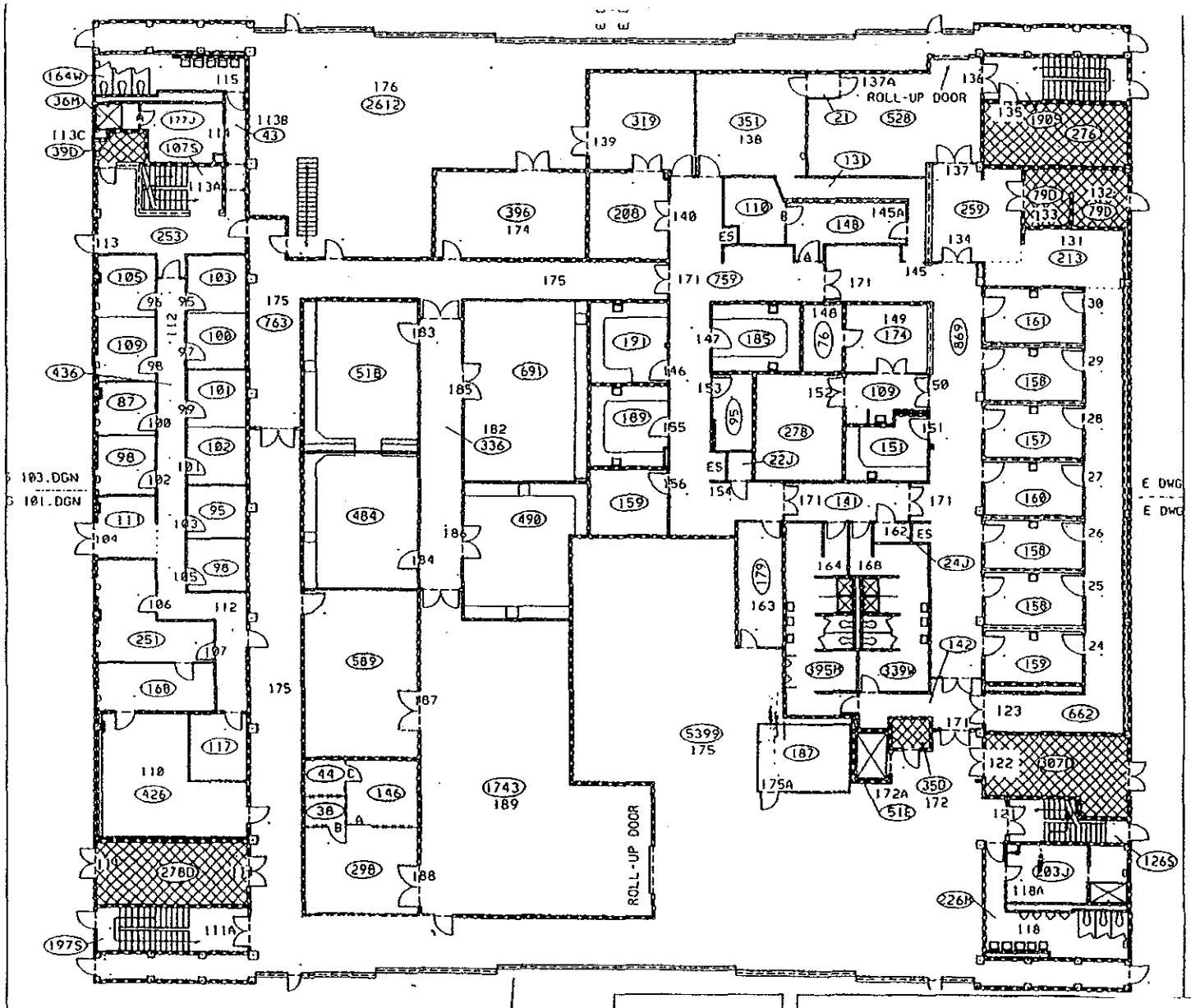
LSSC FACILITIES UTILIZATION

FACILITY: BOSU



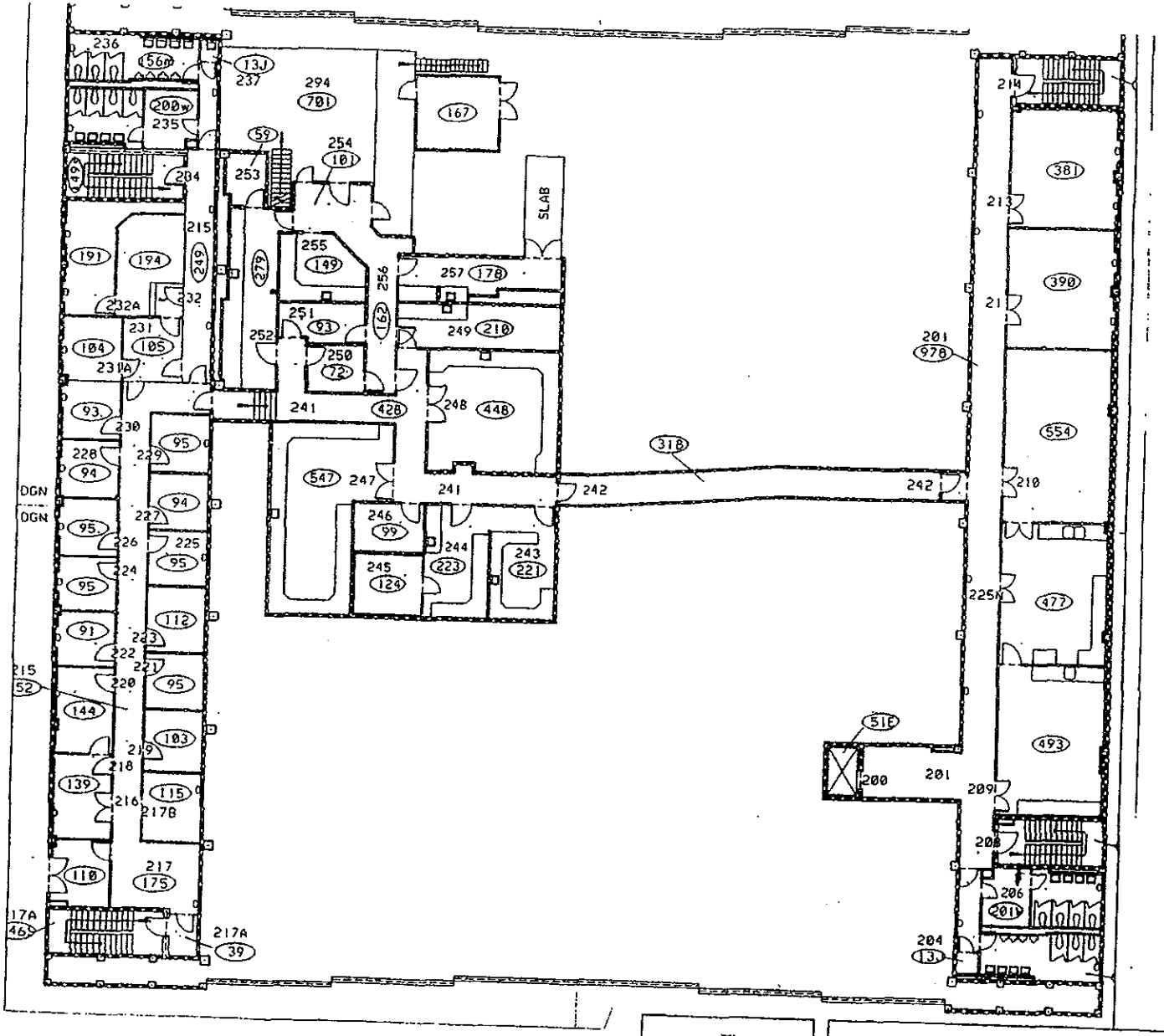
LSSC FACILITIES UTILIZATION

FACILITY: Dryden Labs



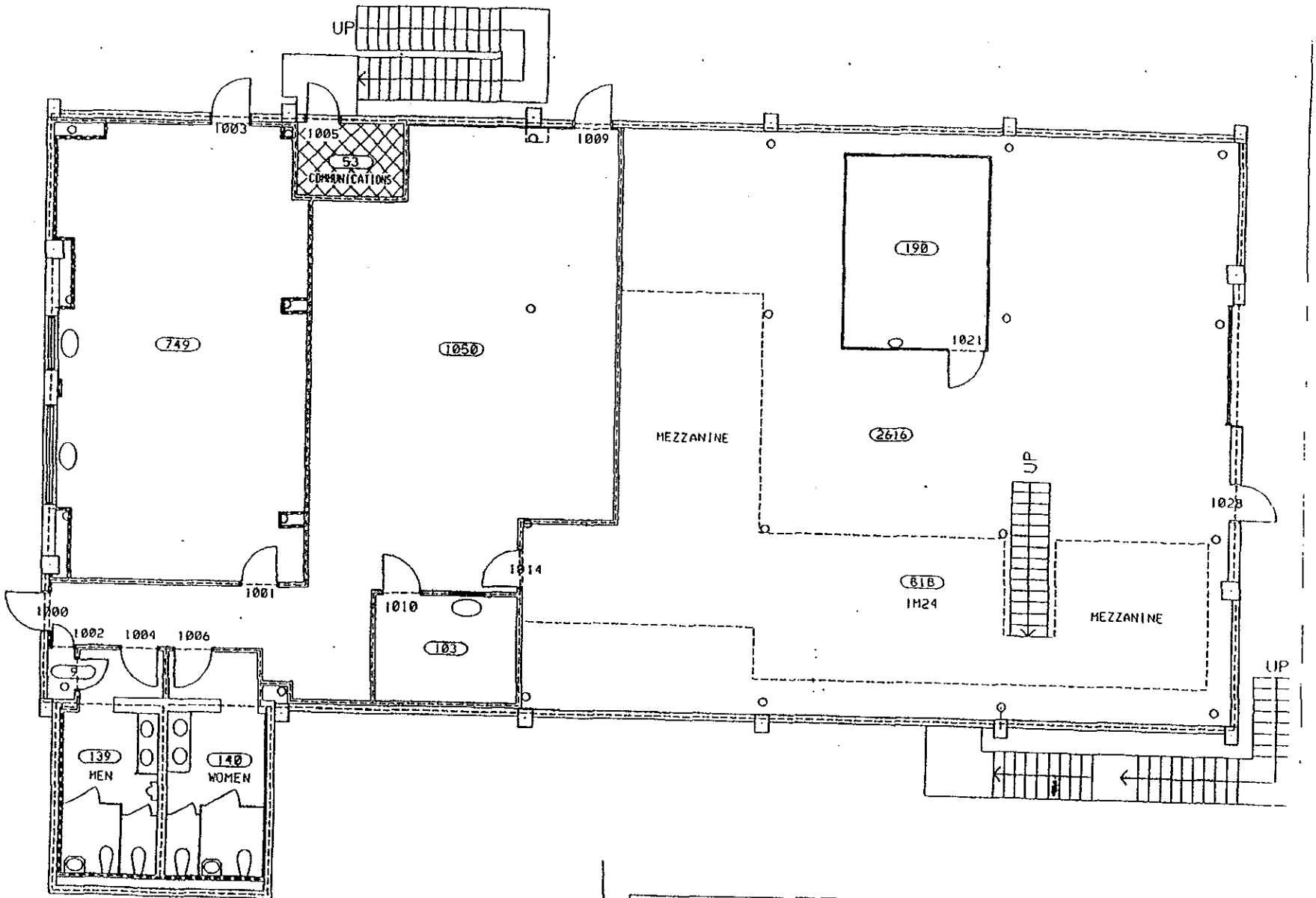
LSSC FACILITIES UTILIZATION

FACILITY: Hangar L 1st Floor



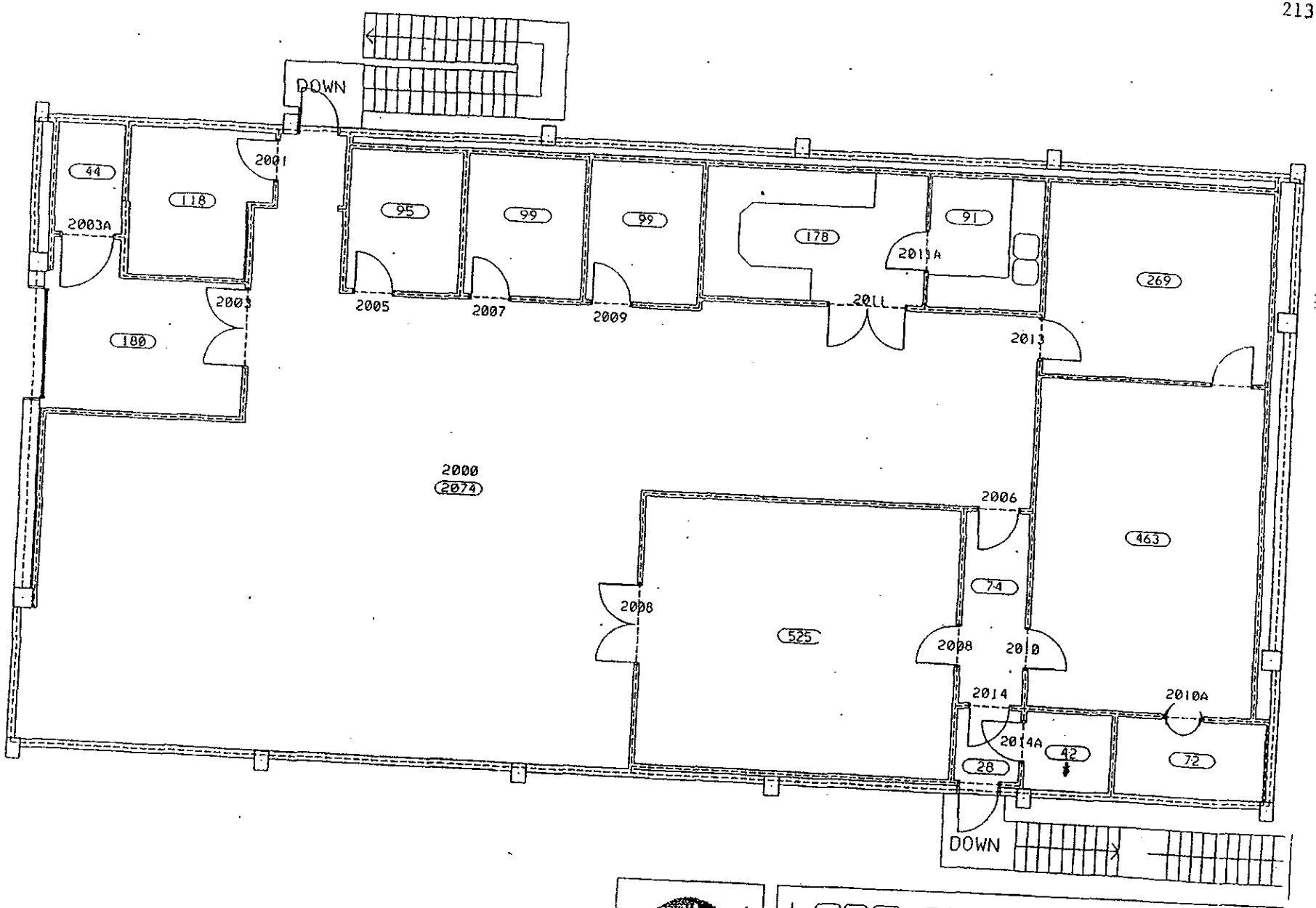
LSSC FACILITIES UTILIZATION

FACILITY: Hangar L 2nd Floor



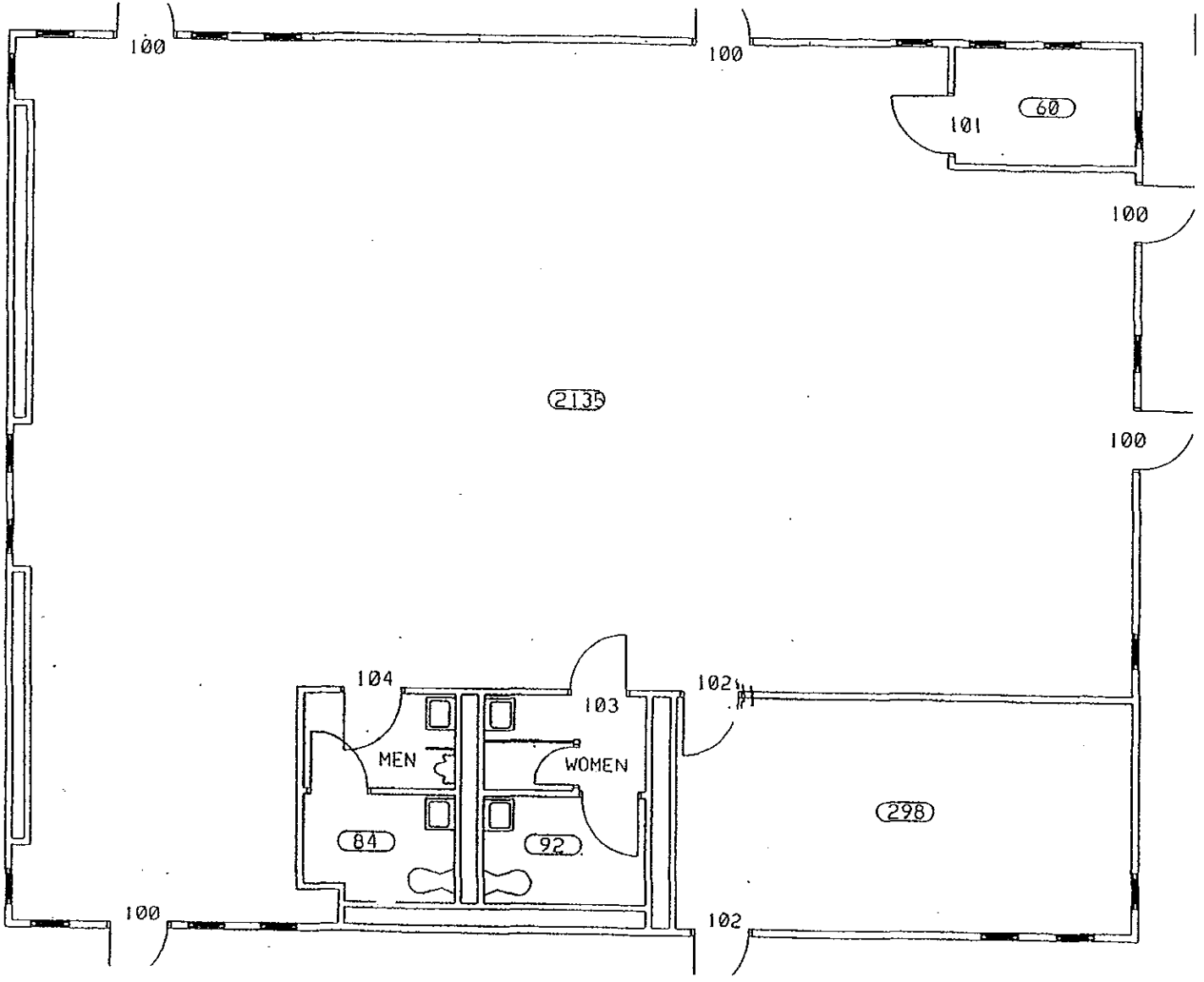
LSSC FACILITIES UTILIZATION

FACILITY: Hangar Little L 1st Floor



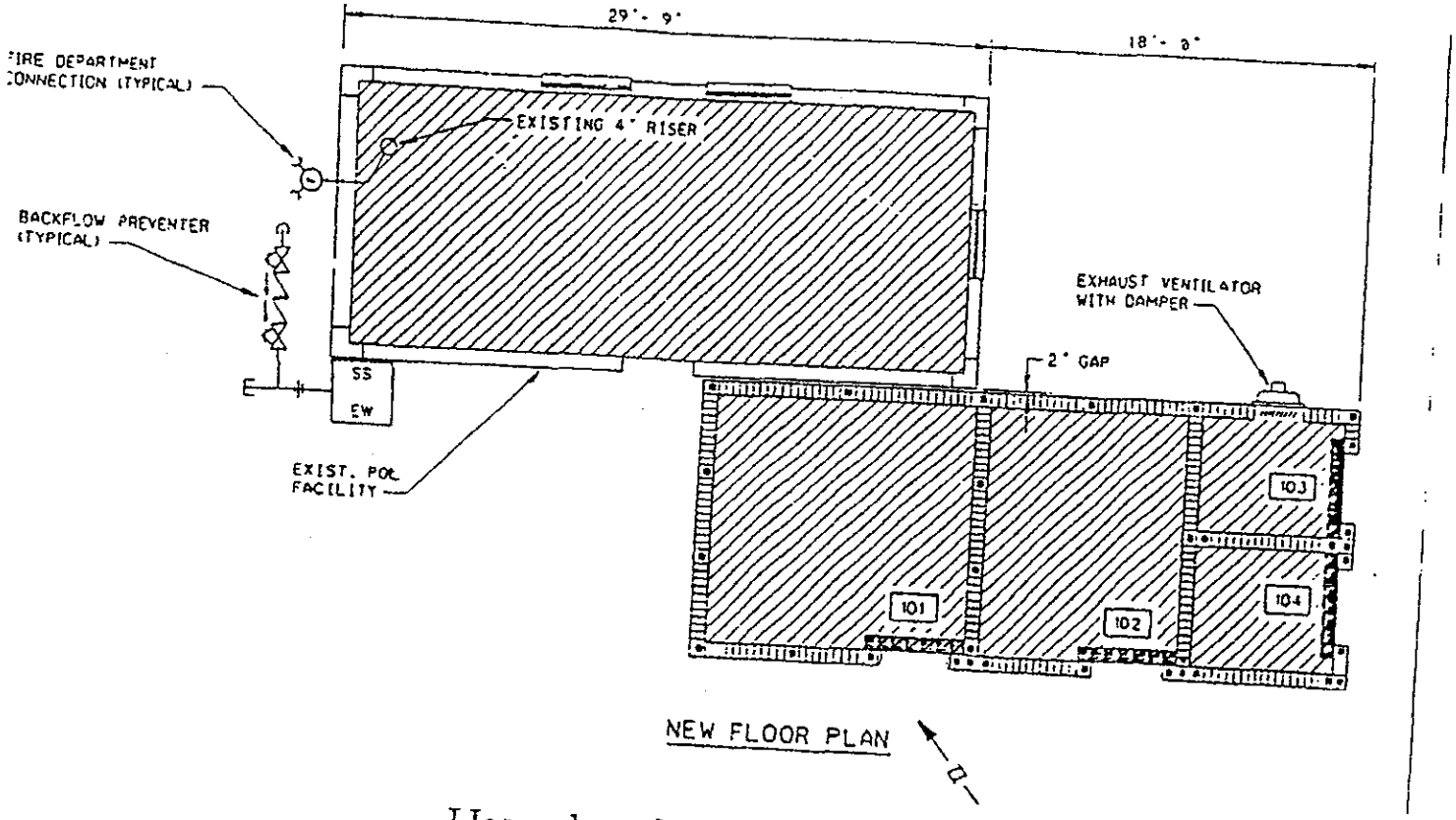
LSSC FACILITIES UTILIZATION

FACILITY: Hangar Little L 2nd Floor



LSSC FACILITIES UTILIZATION

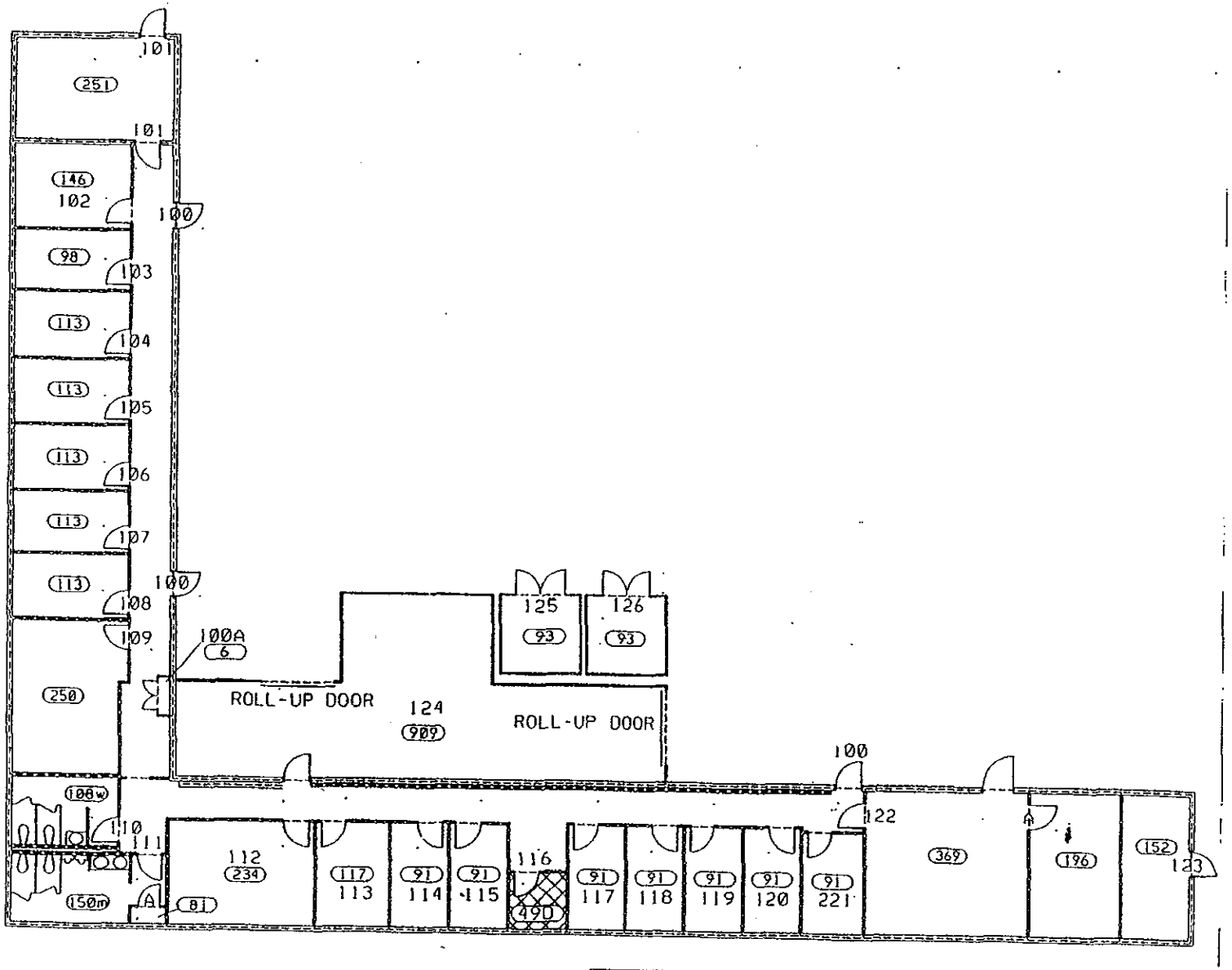
FACILITY: Hangar L Outback



Hazardous Waste Staging Facility
(supporting LSSF)

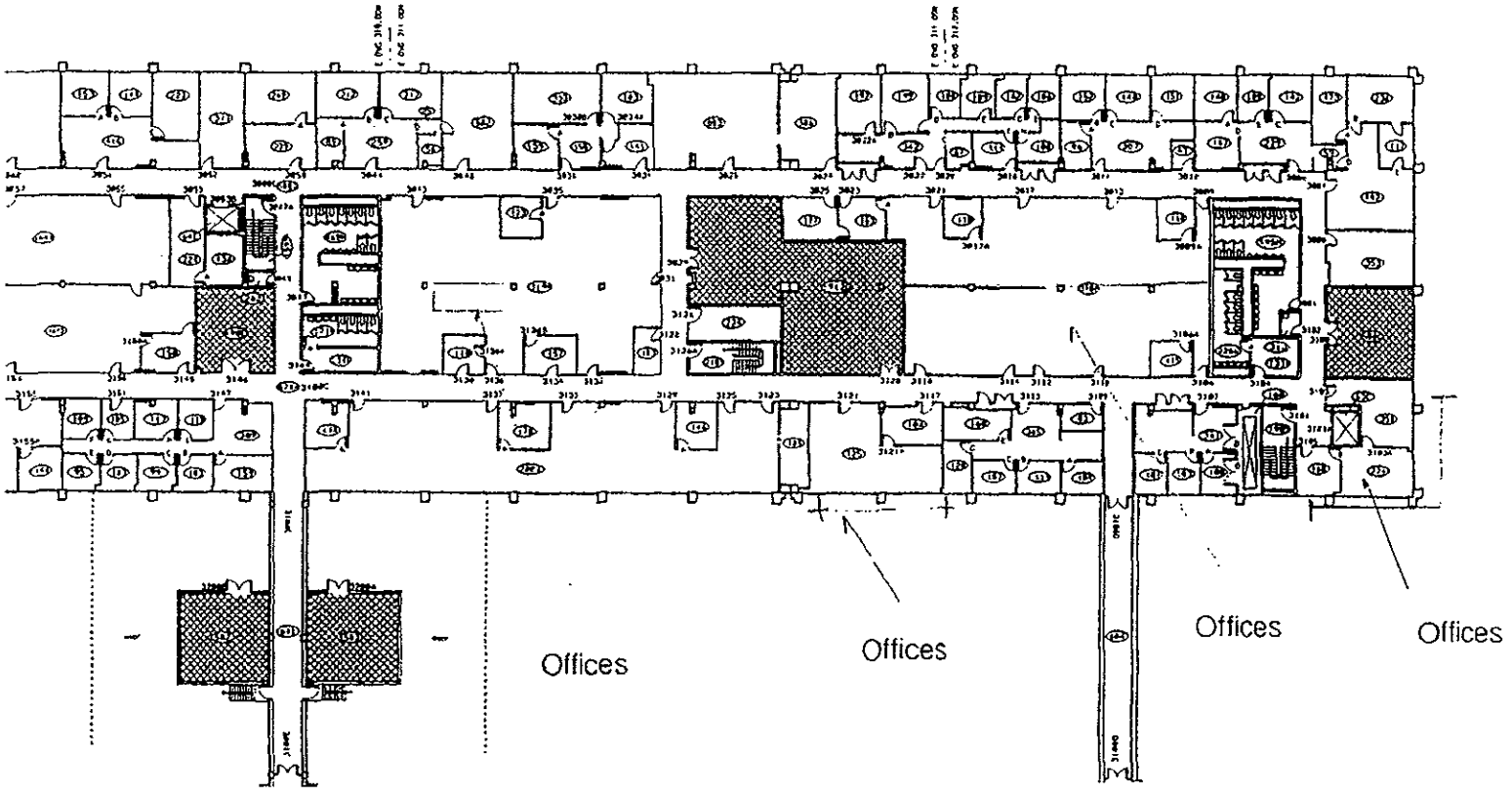
LSSC FACILITIES UTILIZATION

FACILITY: Hazardous Waste Staging Facl.



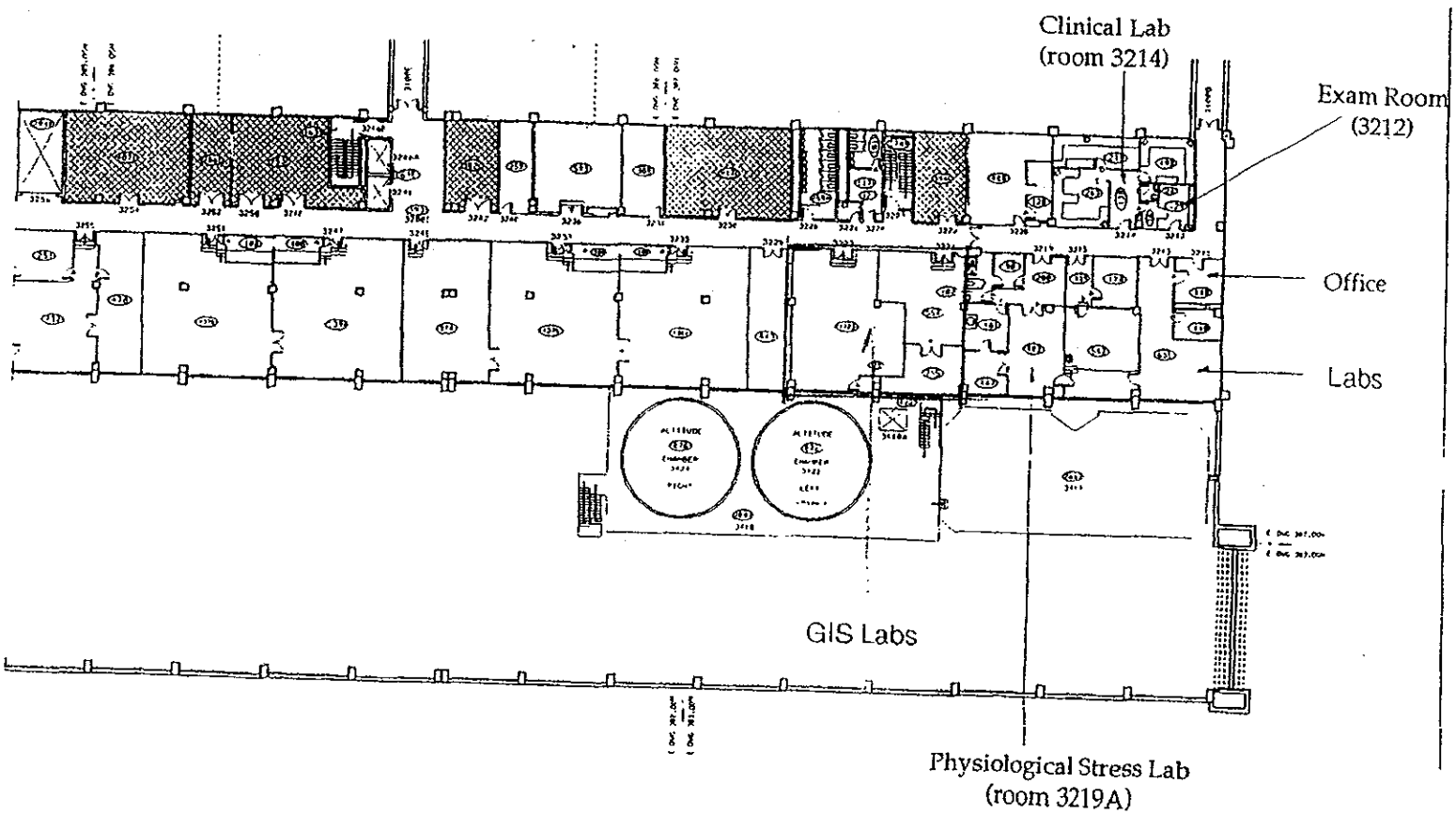
LSSC FACILITIES UTILIZATION

FACILITY: Bldg 66235 CCAS



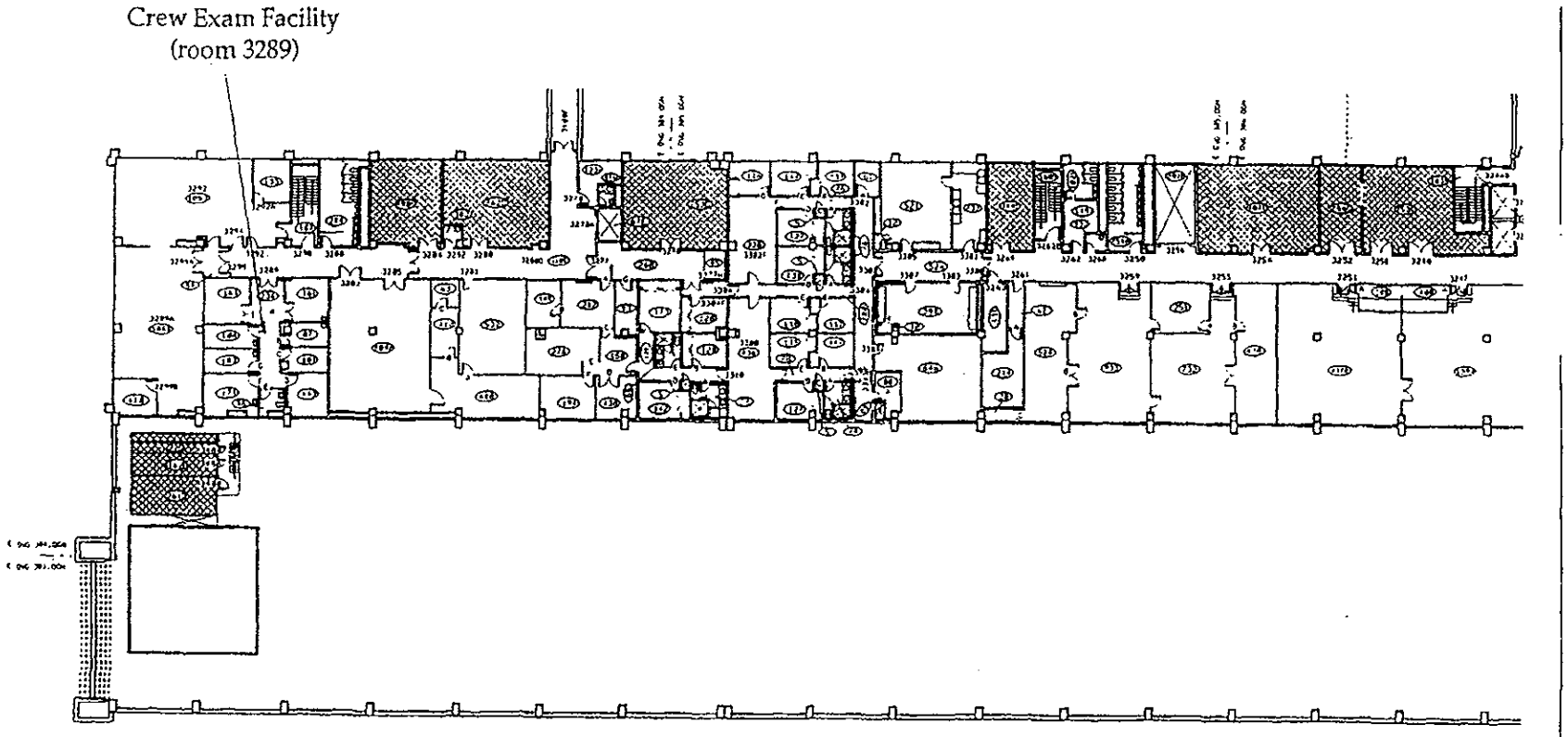
LSSC FACILITIES UTILIZATION

FACILITY: O&C 3rd – A&E East



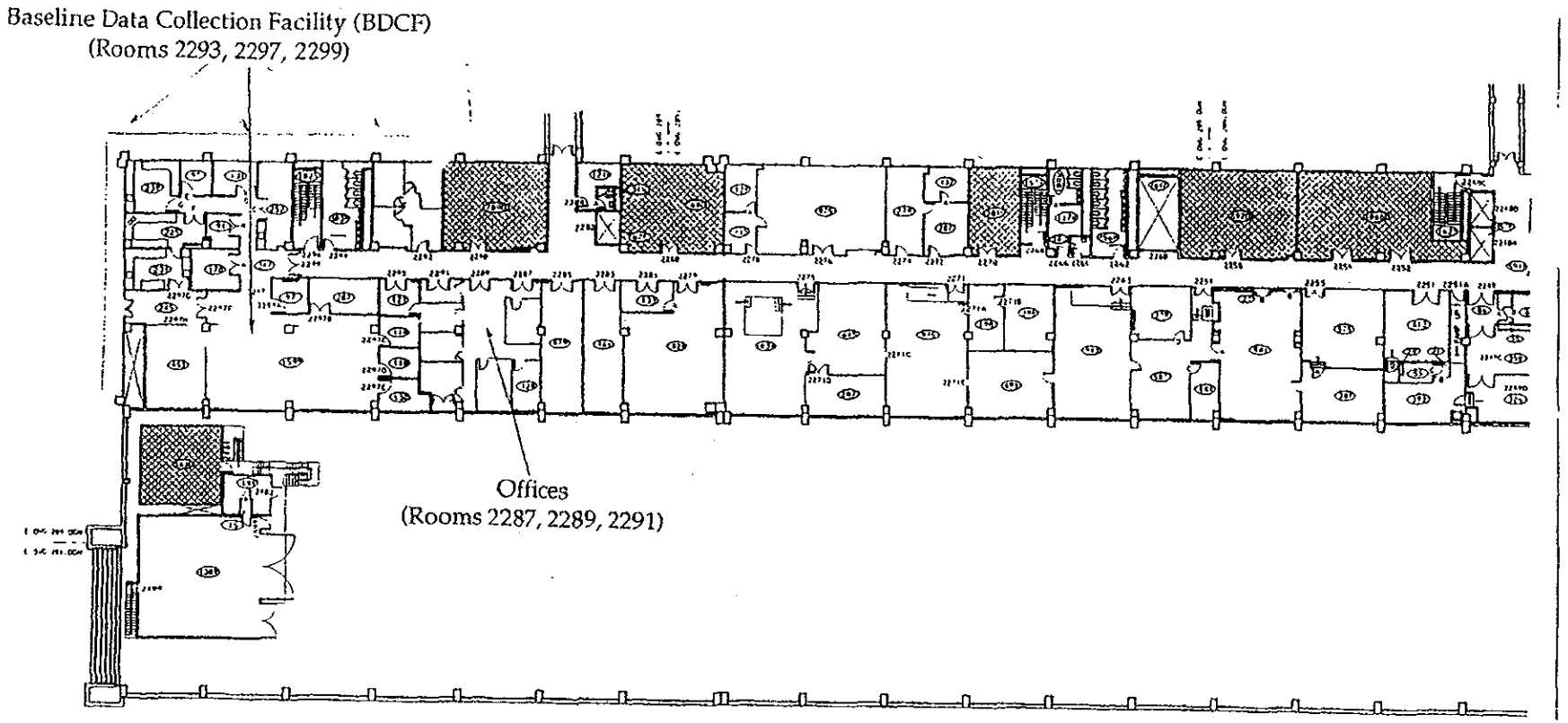
LSSC FACILITIES UTILIZATION

FACILITY: O&C 3rd - L&C/A&T East



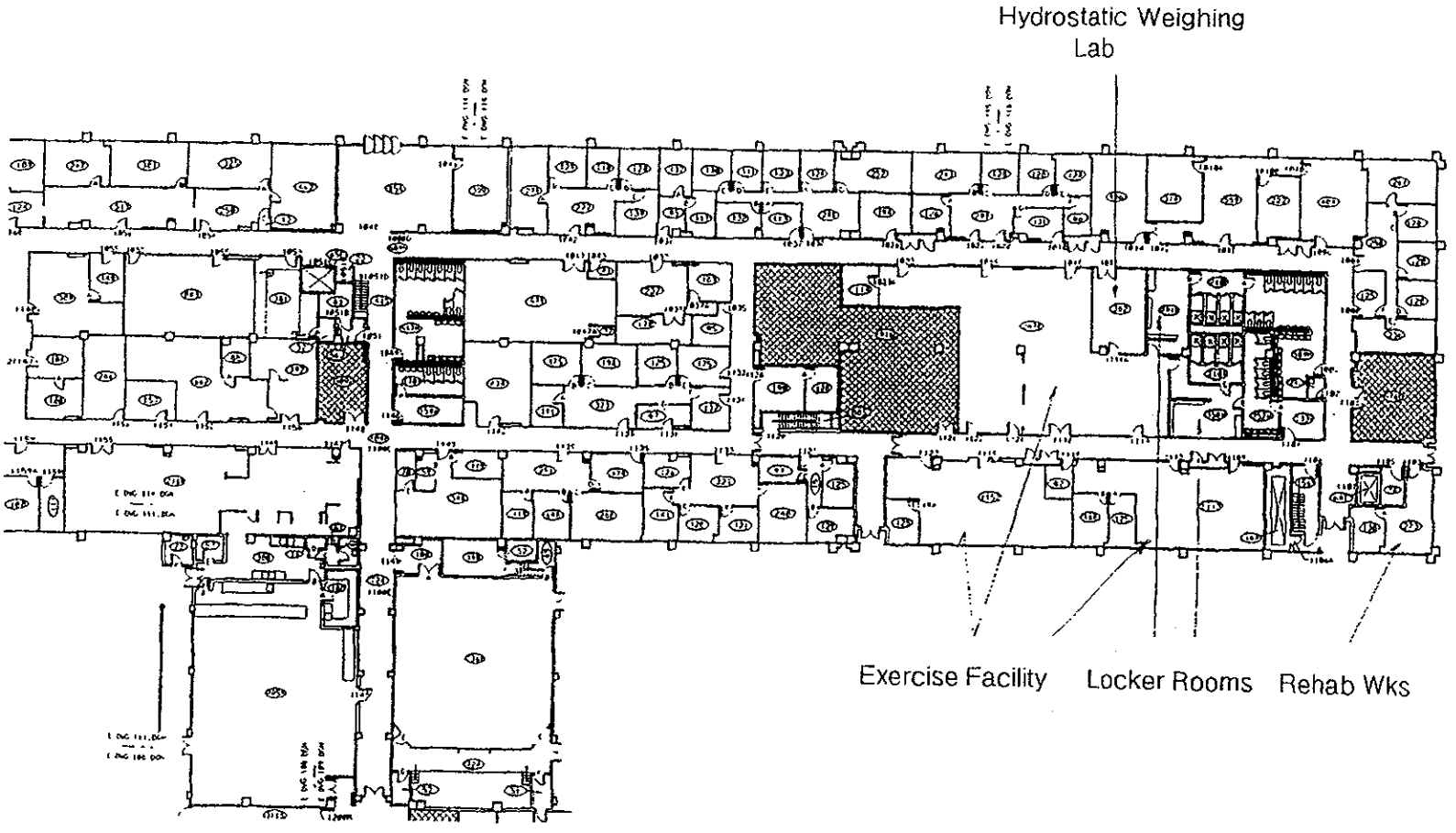
LSSC FACILITIES
UTILIZATION

FACILITY: O&C 3rd - L&C/A&T West



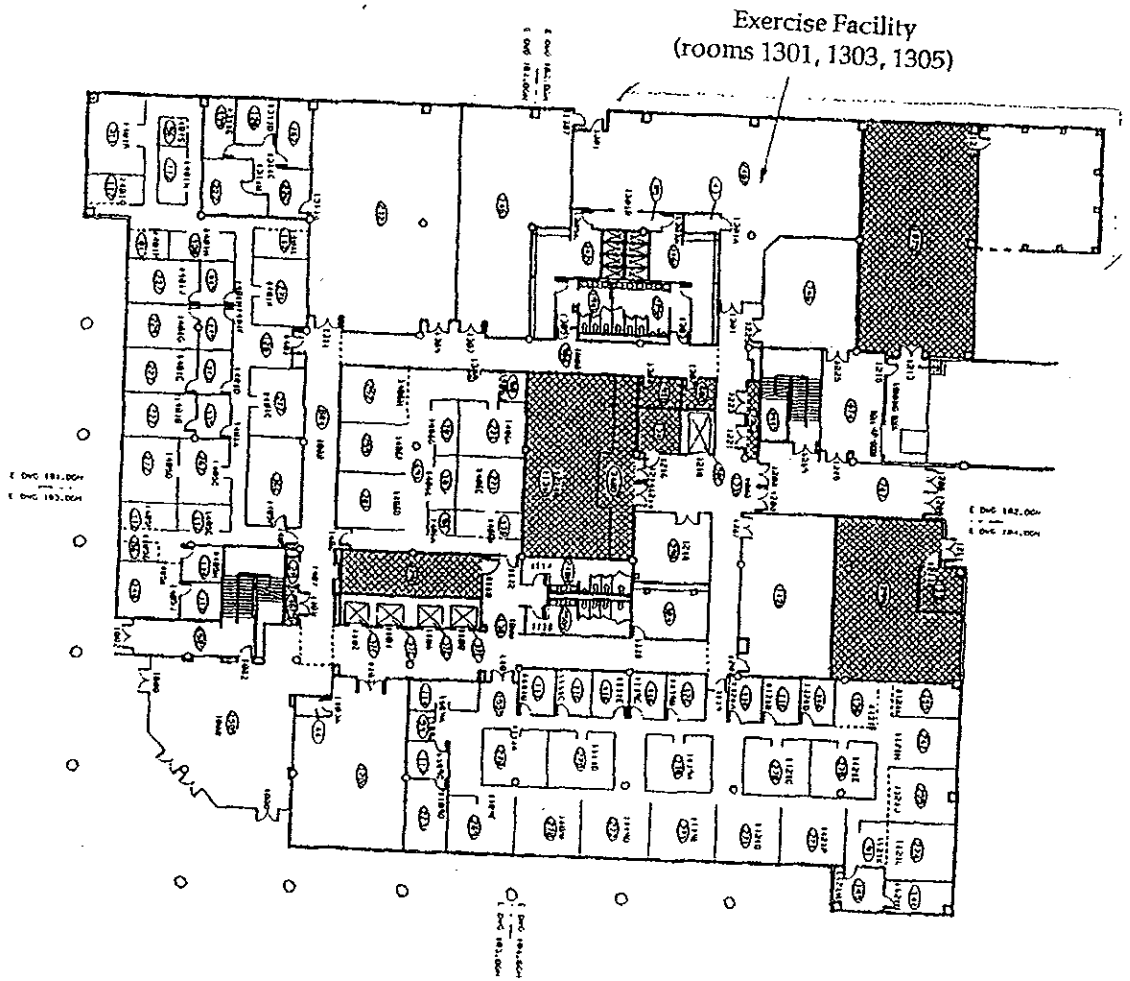
LSSC FACILITIES UTILIZATION

FACILITY: O&C 2nd Floor



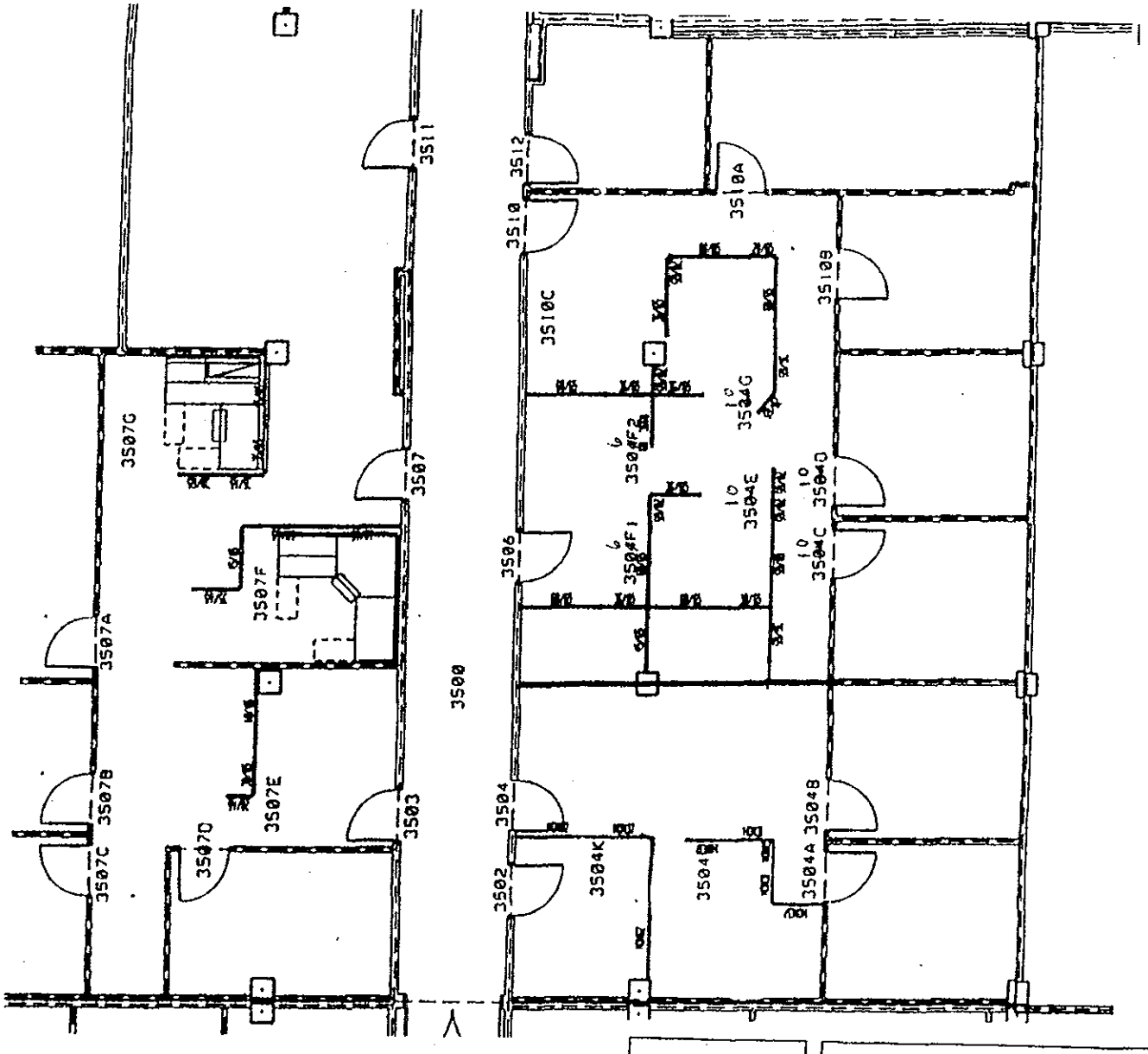
LSSC FACILITIES UTILIZATION

FACILITY: O&C 1st Floor



LSSC FACILITIES UTILIZATION

FACILITY: Operations Support Building



NASA

LSSC FACILITIES UTILIZATION

FACILITY: HQ 3rd – Occupational Health

APPENDIX 8 to ATTACHMENT I

SERPL AGREEMENT

REAL PROPERTY USE PERMIT AGREEMENT

BETWEEN

THE UNITED STATES

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

AND

THE STATE OF FLORIDA

SPACEPORT FLORIDA AUTHORITY

FOR

DESIGN, CONSTRUCTION, AND OPERATION

OF THE

SPACE EXPERIMENT RESEARCH & PROCESSING LABORATORY

CUSTOMER AGREEMENT NUMBER: KCA-1683

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1. AUTHORITY

1.1. This Real Property Use Permit Agreement (hereinafter, "Agreement") is entered into by the National Aeronautics and Space Administration, John F. Kennedy Space Center (NASA), an agency of the United States Government (the "Government" or "United States") located at Kennedy Space Center, Florida 32899, pursuant to authority of Sections 203(c) of the National Aeronautics and Space Act of 1958, as amended, 42 U.S.C. §2473(c) and 14 CFR 1204.501 and 1204.504; and by Spaceport Florida Authority, a public corporation, body politic, and subdivision of the State of Florida (SFA), located at 100 Spaceport Way, Cape Canaveral, Florida 32920 pursuant to the authority of Chapter 331, Part Two, Florida Statutes. NASA and SFA may be referred to jointly as the "Parties," and each separately as a "Party."

2. PURPOSE AND SCOPE

2.1. NASA, by virtue of Section 102 of the National Aeronautics and Space Act of 1958, as amended, 42 U.S.C. §2451, is directed to conduct its activities so as to contribute to the preservation of the role of the United States as a leader in aeronautical and space science and technology and their applications and to cooperate with other public and private agencies and instrumentalities in the use of services, equipment, and facilities.

2.2. SFA is committed to improving and promoting space activities and the aeronautical and space industries within the State of Florida and providing unified direction for space-related economic growth and educational development.

2.3. In furtherance of the foregoing NASA directive and SFA commitment, NASA hereby grants a leasehold interest in the Designated Site containing 37.099 acres, more or less, as described in Exhibit A for the construction, use, access, maintenance and operation (as a landlord) of the Space Experiment Research & Processing Laboratory (SERPL) and authorizes SFA to finance, construct, commission, certify as substantially complete, operate, and maintain, all as provided for further in this Agreement, the SERPL facility, including required building site work. The SERPL will support NASA science and research activities, the International Space Station (ISS) Program, and other science, research, and technology applications activities. SFA and NASA (the Parties) intend this Agreement to benefit their mutual interests in commercialization of space and related activities and support of international space activity. In furtherance of such activities, SFA is authorized to lease SERPL facility space to others in compliance with the terms specified herein.

3. TERM OF AGREEMENT

This Agreement becomes effective upon the date of the last signature below and provides for an occupancy of the Designated Site for construction activity and a term of thirty (30) years beginning upon actual SERPL occupancy (Term Beginning Date) and ending thirty (30) years thereafter (Term Expiration Date), unless sooner terminated in accordance with its provisions.

4. DESIGN, CONSTRUCTION, & PERMITTING PARTICIPATION

4.1 The SERPL will be a world-class laboratory facility with capability to host ISS experiment processing and biological and life sciences research. Anticipated research activity includes biotechnology, microgravity, space agriculture, biomedicine, and other fields of biological and life sciences. The SERPL will be the magnet facility for a proposed adjacent 400-acre Space Commerce Park.

4.2 Project Managers and Construction. Each Party will participate in SERPL design and construction. NASA shall appoint a NASA Project Manager (NPM) and SFA shall appoint an SFA Project Manager (SPM). The NPM will lead the design and activation phases of the SERPL and the SPM will lead the construction phase of the SERPL.

4.3 Design Phase. Under the direction of the NPM, the NASA awarded design contract will be administered under NASA contract procedures. During the design phase, NASA shall regularly furnish to the Florida Department of Management Services (DMS), as agent for SFA, copies of SERPL design documents. NASA will receive and consider timely design review comments from DMS at each design review stage. NASA shall cooperate with the SFA/DMS effort to establish a guaranteed maximum price ("GMP") contract with its construction manager prior to completion of the 100% design phase. The GMP shall not exceed SFA's identified, authorized, available funds ("SFA Budget"). NASA assumes all SERPL design cost.

4.4. Construction Phase. SFA shall construct the SERPL in accordance with approved State of Florida contracting procedures using DMS Construction Management at Risk Contracting, contingent upon appropriation of funds by the Legislature of the State of Florida and receipt thereof from the State of Florida. The SPM will lead the construction phase and will provide day-to-day oversight of the construction activities. The SPM will utilize the NASA Architect-Engineer design contractor's Construction Administration Services and the State of Florida Construction Monitoring Services during SERPL construction. SFA shall have the responsibility for assuring that the construction of the SERPL materially conforms to the design plans and specifications provided by NASA not to exceed the SFA Budget. SFA shall be responsible for all construction cost,

including utility connection fees and NASA contractor required support for utility connections, not to exceed the SFA Budget.

4.5 Permitting. NASA shall be responsible for obtaining all required environmental permits in a timely manner. SFA shall be responsible for obtaining all required building permits in a timely manner.

4.6 Activation Phase. Under NPM direction, NASA shall be responsible for SERPL activation in accordance with an Activation Plan to be prepared by NASA.

4.6.1 Activation shall include:

(i) Providing, and as required installing, telephone and facsimile transmission end instruments and computers as required by NASA programs.

(ii) Providing, and as required installing, non-fixture laboratory equipment as required by NASA programs.

(iii) Final connection of all SERPL communication systems to the NASA communication infrastructure.

(iv) Providing and installing specialized security systems as required by NASA programs.

(v) Providing all specialized procedures and equipment for intended use by NASA or its contractors as required by NASA programs.

4.6.2. SFA will provide joint occupancy during construction as reasonably required for NASA activation provided, however, that SERPL construction progress shall not be unreasonably impeded or delayed by such occupancy.

4.6.3. Premise wiring and infrastructure for all activation required systems, including conduits and power, shall be provided by SFA as part of SERPL construction in accordance with the approved design and not to exceed the SFA Budget.

4.6.4. NASA shall be responsible for all activation costs other than infrastructure.

5. ENVIRONMENTAL CONDITION OF DESIGNATED SITE

5.1. As soon as practical after execution of this Agreement, and prior to the initiation of construction, SFA agrees to prepare an Environmental Condition Report (ECR), signed by representatives of NASA and SFA. The ECR will set forth those environmental conditions and matters on and affecting the Designated Site as of the Term Beginning Date, as determined from the records and analyses reflected therein.

5.2. Upon the Term Expiration Date or earlier Termination of this Agreement, an updated ECR shall be promptly completed and signed by representatives of NASA, SFA, and any assignee or sub-lessee of SFA or of NASA as deemed appropriate by the Parties. The ECR update will set forth those environmental conditions and matters on and affecting the Designated Site on the Term Expiration Date or earlier Termination date of this Agreement. The vacating Party shall be responsible for preparing such ECR.

6. GENERAL RESPONSIBILITIES

6.1. NASA hereby authorizes SFA to engage in the following activities upon the Designated Site, at SFA's sole cost and expense, not to exceed the SFA Budget, during the design and construction of the SERPL, contingent upon appropriations of funds from the Legislature of the State of Florida and receipt thereof from the State of Florida, and SFA will use reasonable efforts to:

6.1.1. Comply with all applicable NASA safety and security requirements for SFA's SERPL related activities at KSC which shall be the same as apply to NASA and NASA contractors and which are identified in Condition 17.2.

6.1.2. Finance, construct, commission, certify as substantially complete, operate (as defined in Condition 2.3. above) and maintain (as provided for in Condition 8 hereinafter), and lease for space for NASA mission related purposes a 100,000 (more or less) square foot SERPL facility with associated site work and a driveway from Kennedy Parkway , including all services sufficient to complete construction in accordance with the NASA provided design not to exceed the SFA Budget.

6.1.3. Provide street, road, and sidewalk construction; utility and civil infrastructure construction; including all construction required for security; sanitation; electrical power, communications, sewage removal, stormwater treatment, and other utilities not to exceed the SFA Budget.

6.1.4. Commencing upon the SERPL substantial completion date, as determined jointly by the SPM and NPM, continuously make available and

provide by annual lease or similar arrangement to NASA or its contractors at a total annual charge not to exceed amounts specified in Condition 7, below, all SERPL research, processing, and associated administrative support space as may be required in the conduct of NASA programs and for which funds are available. As may be approved by NASA, SERPL space not required for NASA programs may be provided by SFA to third-party users in accordance with the terms and conditions of this Agreement to the extent available and not interfering with NASA program utilization.

6.1.5. Comply with all laws, requirements and regulations applicable to SFA or its activities on Government-owned property, whether issued by a NASA field installation or other Government authority. In the event SFA believes there is a conflict between laws, requirements, or regulations, SFA shall promptly bring such inconsistency to the attention of the NPM.

6.1.6. Funding for the site preparation for the SERPL shall be provided through SFA as a portion of the SFA Budget under a Florida Department of Transportation (FDOT) project grant. The grant from FDOT to SFA also includes funding for the construction by NASA of the SFA portion of the public access roadway to connect from NASA Causeway (State Road 405) to Kennedy Parkway (State Road 3) the proposed Space Commerce Park. The construction of the connector road is not part of this Agreement. That portion of the FDOT grant funding related to the road construction is addressed by separate agreement between NASA and SFA.

6.2. NASA, at its sole cost and expense, subject to availability of funds, will use reasonable efforts to:

6.2.1. Provide the Designated Site for the exclusive purpose of construction and operation of the SERPL and such incidental facilities, easements and rights of entry as are contemplated and necessary under this Agreement.

6.2.2. Provide the SERPL design, including architectural and engineering services, sufficient to provide adequate plans and specifications for complete SERPL construction and activation. (Providing such design shall not establish any commitment or obligation to use or pay for use of SERPL space.)

6.2.3. Design, equip, operate, and manage all SERPL laboratories and specialized research areas as required for NASA programs.

6.2.4. Annually provide a Facility Utilization Plan establishing projected requirements for NASA program use of the SERPL for the calendar year, to be provided to SFA at a reasonable date in advance of the utilization period reported.

6.2.5. Provide SERPL fire and rescue services, emergency response, and security services at no expense to SFA absent a material impact upon NASA due to SFA activities.

6.2.6. Operate and maintain mission-related experiment and research equipment required solely for NASA programs.

6.2.7. Prepare, process, and update as necessary the appropriate documentation as required under the National Environmental Policy Act (NEPA), specifically an Environmental Assessment, to support SERPL implementation.

6.2.8. Provide reasonable access to the facility, including a working security arrangement whereby personnel, contractors, support personnel, visitors, and other individuals requiring SERPL access will be integrated into the KSC security and visitor control process, including badging, as decided by NASA in its sole discretion, to be necessary. In its sole discretion, NASA may increase or decrease security levels and procedures required for access to the facility and grounds and may discontinue or reinstate any or all security requirements for access to the grounds at various times as deemed appropriate by NASA.

6.2.9. To the extent that NASA identifies program requirements and available funds for SERPL research, processing, and associated administrative support space, NASA shall satisfy such requirements or authorize its support contractors to satisfy such requirements through annual lease from SFA or similar arrangement for use of the SERPL space, *provided that* any such arrangements shall be in compliance with applicable laws, rules, regulations, and policy and at prices limited by Condition 7, below.

7. LIMITATION ON CHARGES TO NASA AND NASA CONTRACTORS

7.1. The total of all rental, leasing, and other charges to NASA and its contractors for all required SERPL space for any period shall not exceed a fair and reasonable price or fair market value for such required space, considering all relevant factors, including comparable facilities in the general area; and

7.2 Under any arrangement to provide required SERPL space to NASA or its contractors, the total of all rental, leasing, and other charges to NASA and its contractors for use of any portion of or the entire SERPL shall not exceed $1.2 million annually (escalated 3% per year after 1999).

8. MAINTENANCE AND OPERATIONS AND UTILITY COSTS

8.1. For periods in which the SERPL is predominantly occupied by NASA or its contractors, SFA shall be responsible for SERPL O&M costs in the

fixed amount of $400,000.00 per year (escalated 3% per year after 1999) (the SFA O&M Budget). Payments will commence upon substantial completion of SERPL construction and predominant occupancy by NASA or its contractor and will be paid to NASA or its contractor to be applied to overall SERPL O&M costs. For periods in which the SERPL is predominantly occupied by NASA or its contractors, SFA shall have no other SERPL O&M responsibility.

8.2. Except for periods of NASA or its contractor's predominant occupancy as described in Condition 8.1, above, SFA within the SFA O&M Budget shall be responsible for all costs of SERPL maintenance and operation (O&M). During any such period as described in this condition 8.2 SFA shall not be obliged to make payment to NASA or its contractors of the $400,000.00 per year (escalated 3% per year after 1999) described in condition 8.1 herein. SFA shall not be responsible for costs of specialized maintenance uniquely related to NASA program requirements, such as disposal of unusually hazardous biological or radiological material and maintenance of scientific or experimental equipment or fixtures, that do not support building systems.

8.3. As used in this Condition 8, SERPL O&M costs include, but are not limited to, all costs for grounds keeping and building exterior maintenance, stormwater treatment system maintenance, janitorial services, painting, and building systems O&M, including, but not limited to mechanical, plumbing, electrical, HVAC, premise wiring, communications, security, and specialty systems.

8.4. NASA shall be responsible for utility cost and payment of bills for electricity, water, communications, and sewage disposal for portions of the SERPL occupied by NASA or its contractors, and SFA shall assess no charges or fees against NASA related thereto nor shall SFA be responsible for any NASA or its contractors' utility costs. The cost and payment of such utility bills are not considered to be SERPL O&M costs for the purposes of Condition 8.

8.5. SFA shall ensure reimbursement in accordance with applicable procedures of Exhibit C to this Agreement to NASA for utility cost allocable to approved, exclusive, non-NASA use arranged by SFA.

9. DISCLAIMER OF NASA FINANCIAL LIABILITIES

9.1. Unless otherwise specifically agreed to in this Agreement, NASA shall have no obligation to:

(a) Make any payment to defray any SFA costs

(b) Defray any losses sustained by SFA

(c) Assume any indebtedness of SFA

(d) Provide any funds, utilities, facilities, maintenance, personnel, exhibits, training or other services unless specifically set forth in this Agreement.

9.2. Unless specifically agreed otherwise in writing, SFA shall, within the SFA Budget, fund and be responsible for any and all costs caused by any SFA change orders, SFA cost overruns, or SFA budget revisions during project implementation and operation (as defined in Condition 2.3, above), and shall not charge such costs back to NASA or its contractors or subcontractors. If such costs are the result of actions by NASA or its contractors or subcontractors the party responsible shall be obligated to make payment.

9.3 Except as provided for otherwise herein, all SERPL building construction phase costs, to include commissioning by SFA contractors, including utilities connections, will be the responsibility of SFA.

10. CONSIDERATION

10.1. SFA shall pay to NASA in cash the rental fair market value of the Designated Site in the amount of NINETEEN THOUSAND TWO HUNDRED DOLLARS US ($19,200.00) per year, beginning on the Term Beginning Date, payable annually in advance on or before January 15 of each year to commence upon the year following the date of substantial completion of SERPL. The cash payment amount shall be adjusted every five (5) years thereafter pursuant to Conditions 10.1.1 and 10.1.2 below ("Adjustment Date"). Compensation shall be made payable to NASA-Kennedy Space Center (KSC) and forwarded by SFA to:

National Aeronautics and Space Administration
John F. Kennedy Space Center
"Collections Agent"
Mail Code: GG-B-B
Kennedy Space Center, FL 32899

10.1.1. The cash payment amount shall be adjusted on each Adjustment Date to reflect the fair market value of the Designated Site (exclusive of SFA-owned improvements thereon) as determined by an appraisal performed within ninety (90) days of the Adjustment Date.

10.1.2. The amount payable by SFA to NASA following an Adjustment Date shall in no event be less than the amount payable to NASA during the last Agreement year prior to such Adjustment Date.

10.2. For any period in which Designated Site improvements are predominantly occupied by agencies of the United States or their contractors, the cash payment reflecting the fair market value shall be waived.

10.3. SFA shall also pay to NASA on demand any reasonable sum which may have to be expended after the expiration, revocation, or termination of this Agreement in restoring the premises to the condition required by Condition 20.8. below.

11. SCHEDULE AND MILESTONES

The scheduled major milestones for the design, construction, commission and activation of facilities are as indicated in Exhibit "B".

12. CONSTRUCTION AND ACTIVATION RESPONSIBILITIES

12.1. NASA is responsible for providing a design that meets the requirements for the SERPL, including infrastructure inside the facility and utilities for the entire site. NASA and it's design Architect-Engineer shall cooperate with SFA, DMS and their Construction Management Contractor during the design phase to provide a scope of design that can be constructed within the SFA Budget.

12.2. All construction work under this Agreement shall conform to design plans and specifications provided by NASA not to exceed the SFA Budget

12.3. All changes to the design plans and specifications after completion of the design phase must be approved by the NPM and the SPM prior to incorporation into the construction. SFA will utilize the Florida State DMS as its agent for construction activity. DMS will provide the NPM two (2) sets of all shop drawings, and changes to plans and specifications (e.g., change orders, engineering orders, changes, Requests for Information, deviations, waivers). The NPM will provide review comments to DMS within 2 weeks of receipt. Any non-concurrence by NASA shall be resolved prior to disposition/approval of change orders, deviations or waivers.

12.4. Environmental permit applications will be completed by NASA. Copies of permits and renewals will be made available to SFA as needed for project construction. If determined advantageous by NASA, SFA, at no expense to SFA, will serve as governmental sponsor for NASA's Environmental Permit Application utilizing the State of Florida's "Fast Track" permitting procedures. SFA shall not be held accountable for any delay in permit approval that may delay construction start.

12.5. SFA, through DMS, will engage the NASA Architect-Engineer design contractor to provide Construction Administration Services, to include shop drawing review, answering of contractor requests for information, review of contractor invoices, and periodic review of the construction for conformance to the intent of the construction documents, not to exceed the SFA Budget.

12.6. NASA shall have the right to review all construction bid/proposal responses prior to award of any construction contract. NASA and SFA shall ensure that necessary funding for construction, including a reasonable contingency fund, is in place prior to the award of any construction contract. No construction, including site work, shall commence until NASA has consented thereto in writing. Upon completion of construction, SFA shall submit to NASA a complete set of as-built drawings prior to any dedication event.

12.7. NASA monitoring of all construction shall be in accordance with procedures prescribed by NASA, and will include NASA reviews and approvals at specific major milestones, including but not limited to the following:

(a) Selection of construction contractors;

(b) Periodic reports, review and inspection by the NPM of construction progress in cooperation with SFA, DMS and SFA's Construction Management Contractor;

(c) Review of all shop drawings and changes;

(d) Participation in all project/construction meetings;

(e) Final inspection and acceptance; and

(f) Submissions of a complete set of as-built drawings to NASA.

12.8. All costs incurred by NASA and its contractors to review Shop Drawings, as builts and to conduct inspections will be NASA's responsibility.

12.9. SFA will provide day-to-day oversight of construction activities, and will be responsible for construction conforming to design plans and specifications not to exceed the SFA Budget.

12.10. Unless otherwise approved in writing by NASA, during construction, provisions shall be made by SFA to ensure that vehicular traffic on area roads are not unreasonably impacted by construction activities.

12.11. All construction shall cease at least 24 hours prior to any scheduled Space Shuttle Launch and shall not resume until at least 2 hours after successful completion of each Space Shuttle Launch. Otherwise, construction

work is allowed between 6 a.m. and 6 p.m. daily. Any deviations shall be approved by the NPM.

12.12. SFA will be responsible through its construction contractor to address, fix, and resolve all punch list items relating to deviations from the Construction Documents that are identified by NASA and end users during final walk down.

12.13. SFA is responsible for obtaining all required documentation for commissioning and O&M of all facilities, systems and equipment procured and constructed by the construction contractor. Required documentation includes, but is not limited to, all vendor data to include operations and maintenance manuals, catalog cuts, testing data, maintenance procedures, parts catalogs, vendor recommended spares, and as-built drawings for all facilities, systems and equipment constructed or installed by SFA. SFA will provide Certificates of Completion as required for permits to NASA for submittal to the appropriate regulatory agencies. SFA will provide copies of all documentation, certificates, permits, and other data to NASA.

12.14. The parties acknowledge that utilities necessary for the construction, operation and maintenance of contemplated facilities are not available. All utilities necessary for facility construction, operation, and maintenance shall be constructed by SFA from the SFA Budget. SFA will be allowed to connect to NASA communications, electrical, natural gas and water systems and sewer treatment facilities and other necessary utilities.

12.15. Any increase in the scope or dimension of the approved SERPL design by NASA shall require the joinder and consent of SFA.

12.16. Mechanics and laborers, including apprentices and trainees, who may be employed or work directly on the site of construction shall be paid labor rates in accordance with the provisions of the Davis-Bacon Act, 40 U.S.C. §276a and 40 U.S.C. §276c.

13. PERFORMANCE AND PAYMENT BONDS

13.1. Prior to beginning work on the Kennedy Space Center under any contract for construction pursuant to this Agreement, SFA shall cause the construction contractor to provide, in a form acceptable to SFA and NASA, two bonds for each contract; specifically, a performance bond and a payment bond, each with a good and sufficient surety or sureties acceptable to NASA and SFA. SFA and NASA shall be named on such bonds as co-payees.

13.2. The penal amount for each performance bond shall be 100% of the contract value at the time of the award. Performance bonds shall be submitted

in the form and following the procedures in Federal Acquisition Regulation (FAR) 52.228-15 and FAR Part 28.

13.3. Payment bonds shall be submitted in the form and following the procedures in Federal Acquisition Regulation (FAR) 52.228-15 and FAR Part 28. In addition:

(a) When the contract value is $1 million or less, the penal sum will be 50% of the contract value.

(b) When the contract value is in excess of $1 million but not in excess of $5 million, the penal sum shall be 40% of the contract value.

(c) When the contract value is more than $5 million, the penal sum shall be $2.5 million.

13.4. SFA shall promptly furnish additional bond security required to protect NASA and persons supplying labor and materials under any contract for construction entered into pursuant to this Agreement if:

(a) Any surety upon any bond furnished under the above paragraphs becomes unacceptable to NASA in the reasonable exercise of its discretion;

(b) Any surety fails to furnish reports on its financial condition as reasonably required by NASA; or

(c) The contract value of any contract for construction entered into pursuant to this Agreement is increased so that the penal sum of any bond becomes inadequate in the reasonable opinion of NASA.

14. INSURANCE

14.1 Insurance Requirements for SFA. SFA shall procure and maintain casualty insurance insuring the improvements constructed and owned by SFA at the SERPL in an amount equal to the replacement value of such improvements as determined by DMS.

14.2 Insurance Requirements for NASA. NASA shall provide self-insurance consistent with federal law and policy in connection with the SERPL, as follows:

(a) Casualty responsibility and risk of loss covering all NASA laboratory equipment, machinery, and inventory;

(b) Federal employee's compensation for occupational injury and illness in compliance with the Federal Employee's Compensation Act as applicable and other applicable Federal law;

(c) General comprehensive liability responsibility in accordance with the Federal Tort Claims Act.

14.3. Insurance Requirement for Contractors and Subcontractors. SFA and NASA shall require that any contractor, subcontractor or operator performing work pursuant to or in furtherance of this Agreement shall provide and maintain during the duration of such contract, subcontract or operating arrangement at least the kinds and minimum amounts of insurance required in Condition 14.3.1 below. Each such policy shall name SFA and NASA as additional insureds and, as appropriate, joint loss payees. The minimum amounts required may, on a case-by-case basis, be adjusted by mutual agreement between NASA and SFA.

14.3.1. Before commencement of any work pursuant to this Agreement, SFA and NASA shall require each contractor, subcontractor or operator under this Agreement to provide certificates of insurance evidencing that the required insurance has been obtained and is in force. All such policies shall contain an endorsement stating that any cancellation or material change shall not be effective unless at least thirty (30) days prior written notice is provided to SFA and NASA. SFA and NASA will require each contractor, subcontractor or operator to produce and maintain during the entire period of their performance under this Agreement the following minimum amounts and types of insurance:

(i) Worker's compensation and employer's liability insurance in compliance with applicable worker's compensation and occupational disease statutes with a minimum limit of $100,000.00 per incident.

(ii) General comprehensive liability insurance with minimum limits of $1,000,000.00 for injury to one person arising out of a single incident and $3,000,000.00 for injuries to more than one person arising out of a single incident, and $1,000,000.00 for property damage;

(iii) Comprehensive automobile insurance which shall include bodily injury and property damage covering all owned, non-owned, hired and government-furnished vehicles with minimum limits of $1,000,000.00 for bodily injury and property damage per occurrence.

15. OPERATIONS

15.1. NASA, in the exercise of its reasonable discretion, may direct SFA to take corrective action to cure any noncompliance by SFA with this Agreement's terms and conditions, written or implied. SFA will cure any noncompliance in its operations as reasonably directed by NASA and demonstrate to NASA's reasonable satisfaction that any cause of noncompliance has been corrected. NASA shall in no way be liable for any expense or loss of revenue by SFA resulting from corrective action directed by NASA for events of noncompliance by SFA.

15.2. SFA, in the exercise of its reasonable discretion, may direct NASA to take corrective action to cure any noncompliance by NASA with this Agreement's terms and conditions, written or implied. NASA will cure any noncompliance in its operations as reasonably directed by SFA and demonstrate to SFA's reasonable satisfaction that any cause of noncompliance has been corrected. SFA shall in no way be liable for any expense or loss of revenue by NASA resulting from corrective action directed by SFA for events of noncompliance by NASA.

15.3. SFA shall, at its cost and subject to approval by NASA, replace, repair, or refurbish any fixtures, facilities, grounds, utilities, or equipment which may be damaged or destroyed as a result of SFA activities unless such damages or destruction result from the action, failure or negligence of NASA or its contractors or its subcontractors.

15.4. SFA agrees all permanent and substantial facility or grounds modifications shall be approved in advance by NASA and shall require Agreement revision. NASA may review construction design and associated drawings for future modifications. Any construction plans estimated to cost $50,000 or more must be supported by a Project Definition Document supplying all information required by the Project Definition Document requirements specified in Exhibit "D" to this Agreement, including a NASA Form 1509."Facility Project-Brief Project Document. Any additional information needed by NASA to complete its review shall be provided by SFA upon receipt of any such NASA request. NASA shall have the right to approve or reject any or all construction plans and utility designs. NASA shall approve, at NASA's option in the exercise of its reasonable discretion, schedules, plans, and contracts for all modifications, additions, or deletions to the extent NASA reasonably deems necessary to protect its interests.

15.5. SFA shall be responsible for the identification of requirements and cost impact, developed in consultation with NASA, for KSC services (e.g., medical, fire, security) in support of non-NASA activities arranged by SFA

pursuant to this Agreement. In accordance with applicable procedures of Exhibit C to this Agreement, SFA shall reimburse NASA the full cost of all impacts upon KSC operations or services arising from SFA arranged non-NASA activities in the SERPL and associated facilities, including, but not limited to, any and all costs associated with increased visitors, population, and traffic on KSC and increased costs related thereto for such services. The Parties shall agree on a reasonable allocation of cost responsibility to SFA under this Condition 15.5, and any such agreement shall be based on and fully compliant with applicable Federal laws, rules, regulations, and policies, including NASA and KSC directives. SFA shall not be responsible under this Condition 15.5 for any costs associated with visitors entering under the auspices of the NASA visitors program or any other NASA program or Federal program.

15.6. NASA or its contractors shall be responsible for obtaining or maintaining accreditations or certifications for NASA operating laboratories, such as accreditation by the Association for Assessment and Accreditation of Laboratories for Animal Care. SFA shall have no responsibilities with relation to these accreditations or certifications.

15.7. SFA shall implement or allow NASA to implement all facility modifications as may be requested by NASA to accommodate program requirements, *provided that* such modification shall not unreasonably interfere with SFA's use of its property, and *provided further* that an equitable adjustment to the financial terms of this Agreement shall be made if the costs of either Party are affected.

16. NASA APPROVAL OF USERS AND USES

NASA shall have absolute and sole discretion without limitation to approve or disapprove any proposed user or use of the SERPL and associated facilities. Other than good faith, there shall be no limitation on the KSC Director's discretion to disapprove or conditionally approve users or uses, any other provision(s) of this Agreement notwithstanding. The Director's decisions to approve, disapprove, or conditionally approve any use or user shall not be subject to dispute, protest, or objection by SFA or any other entity.

17. CONTROLS APPLICABLE TO SFA ACTIVITIES

17.1. SFA activities are subject to, and SFA shall comply with, all KSC coordination and operational requirements, including, but not limited to approval and permit requirements for utility and communication outage coordination, burning, digging, scheduling/access, safety requirements, badging approval, and labor requirements. NASA will provide SFA with points of contact for coordination.

17.2 The following KSC management instructions, and subsequent revisions thereof, which prescribe regulatory procedural criteria applicable to SFA and the SERPL, are applicable to this Agreement and are incorporated herein by reference:

(a) KHB 1040.1G "KSC Comprehensive Emergency Preparedness Plan"

(b) KHB 1200.1D "Management of Facilities, Systems & Equipment Handbook"

(c) KHB 1610.1B-1A "KSC Security Handbook"

(d) KHB 1710.2D "Kennedy Space Center Safety PracticesHandbook"

(e) KMI 1710.18A "KSC Safety Assurance Policy"

(f) KMI 1800.2D "KSC Chemical Hazard Communication Program"

(g) KMI 1810.1I "KSC Occupational Medicine Program"

(h) KMI 1860.1E "KSC Radiation Protection Program"

(i) KHB 1820.4C "KSC Respiratory Protection Program"

(j) KHB 1840.1C "Industrial Hygiene Handbook"

(k) KHB 1860.2B "KSC Nonionizing Radiation Protection Program"

(l) KMI 1870.1C "KSC Sanitation and Pollution Control Program"

(m) KHB 2570.1B "KSC Radio Frequency Spectrum Management Handbook"

(n) KHB 8800.6C "KSC Environmental Control"

(o) KHB 8800.7C "Waste Management Handbook"

(p) KMI 8800.8A "KSC Environmental Management"

These issuances set forth regulatory and procedural criteria that are applicable to SFA for the purposes of this Agreement. NASA shall make such management instructions electronically available to SFA. NASA approval in writing shall be obtained prior to implementation of any proposed deviations to such issuances. SFA will provide NASA two (2) copies of all requests for deviations. NASA will approve or disapprove the request for deviation within 2 weeks of receipt. Upon receipt of notice from NASA of any material noncompliance with any provisions of KMIs or KHBs, SFA shall promptly take corrective action.

17.3. SFA activities under this Agreement shall be subject to the technical surveillance of NASA. As used herein, the term "technical surveillance" includes written and/or oral advice on policy matters, technical advice, procedural guidance and general management, all of which shall be rendered in good faith and recognition of the partnering between the Parties.

18. PROHIBITIONS

18.1. Except with the written consent of NASA, SFA shall not:

18.1.1. Represent itself or permit itself to be represented to the public as an agent of, or part of, the United States Government or NASA by the use of words or symbols implying identification with the United States Government, Kennedy Space Center, or NASA (i.e., on any letterhead or billhead, or on any signs, displays or in any other manner whatsoever).

18.1.2. Permit any contractor or other organization to use the SERPL premises or assign to another all or any part of SFA operations without first obtaining the written consent of NASA pursuant to Condition 24, below.

18.1.3. Use the SERPL or the Designated Site for funds solicitations of any kind unless specifically approved in writing by NASA.

18.1.4. Construct, erect or distribute any sign (including road signs) advertising, presentations or similar materials to be displayed, presented or otherwise made available to the public unless previously approved in writing by NASA. SFA shall be granted signage identifying SERPL as a project of SFA sufficient as to both quantity and quality to fairly and properly reflect the involvement and investment of the State of Florida in SERPL. In addition, there shall be permitted a flag pole or poles for the flying of the United States flag and the State of Florida flag in conjunction with the NASA flag.

18.1.5. SFA shall not sell, or permit the sale, of beer, wine, or other intoxicating liquors on the Designated Site.

19. DISPUTE RESOLUTION

19.1. The provisions of this Condition 19 shall be used to resolve disputes between the Parties which have not, after reasonable effort, been resolved informally. Either Party may invoke this Condition 19 to resolve a dispute. The procedures under this Condition 19 may be modified through mutual consent of the Parties.

19.1.1. The NPM and the SPM shall be each Party's principal point of contact (PPOC) for resolution of disputes arising under this Agreement.

19.1.2. If a dispute cannot be resolved informally within ten (10) working days after specific written notice of disagreement, the matter shall be submitted, in writing, to each Party's PPOC identified above. The PPOCs will then have ten (10) working days within which to resolve the dispute.

19.1.3. If the PPOCs are unable to resolve a dispute within ten (10) working days, either PPOC may refer the dispute to the Deputy Director, KSC and the SFA Executive Director for joint resolution. If these two officials are unable to resolve the dispute within a reasonable time, the Director, KSC will issue an agency decision which shall be final as to all issues raised by the written submission required by Condition 19.1.2., above. The decision of the Director, KSC for the determination of such appeals shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence. In connection with any appeal proceeding under this condition, SFA shall be afforded an opportunity to be heard and to offer evidence in support of its appeal. Pending final decision of a dispute hereunder, SFA shall proceed diligently with the performance of this Agreement in accordance with the Center Director's decision. This Condition does not preclude consideration of law questions in connection with decisions provided for above; provided, that nothing in this Condition shall be construed as making final the decision of any administrative official, representative, or board on a question of law.

19.2. The Parties intend all reasonable efforts shall be made to resolve disputes informally prior to invoking the provisions of this Condition 19.

20. DEFAULT, TERMINATION, EXPIRATION, AND SURRENDER

20.1. The failure of either Party to comply with any material provision of this Agreement, where such failure to comply continues for thirty (30) calendar days after delivery of written notice thereof by either Party to the other, shall constitute a default or breach of this Agreement by the defaulting Party and constitute grounds to terminate this Agreement or to pursue any remedies that

may be available either in law or in equity. If, however, the time required in the exercise of reasonable diligence to return to compliance exceeds the thirty (30) day period, the defaulting Party shall not be deemed to be in default or breach if within such period such Party shall begin and diligently pursue the actions necessary to bring it into compliance with this Agreement in accordance with a compliance schedule approved by the non-defaulting Party.

20.2. No default or breach shall be deemed to have occurred for any period of time during which the Parties are attempting to resolve a dispute, pursuant to the procedures provided for in the Condition 19, above, in relation to the actions or inactions which are the subject of the alleged default or breach. If, pursuant to dispute resolution, a default or breach is determined to have occurred, the period for cure shall not begin until the next regular business day after the final decision on the dispute is issued.

20.3. After prior warning notice given in writing to SFA and allowing reasonable time to cure delays, NASA may terminate this Agreement, without any cost or liability to NASA, in the event that progress on the construction of the SERPL materially fails to proceed in accordance with the agreed construction schedule included in Exhibit B ("Schedule"). The termination notice for insufficient progress shall be effective as of a date to be specified therein, which shall be at least sixty (60) but not more than ninety (90) calendar days after its receipt by SFA.

20.4. This Agreement may be terminated only in its entirety, and without cost to the Government, if there has been a determination by the NASA Administrator, that the compelling interests of the national space program, the national defense, or the public welfare require such termination and a 30-day notice, in writing, has been given to SFA that such determination has been made.

20.5. Written notice of any termination shall be given SFA by the Director, KSC and, except as may be otherwise provided for herein, the termination shall be effective as of the date specified in such notice, but no earlier than 30-days after the receipt of the notice by SFA. SFA or its assignees or sub-lessees shall be liable for all costs, consistent with law and NASA policy, which are incurred as a result of termination by NASA but shall not include its contractors or subcontractors.

20.6. NASA shall not be liable for any costs, loss of profits, revenue or other direct, indirect, or consequential damages incurred by SFA, its contractors, subcontractors, customers, assignees or sub-lessees as a result of the termination by NASA pursuant to this Condition 20.

20.7. This Agreement may be terminated by SFA if NASA has no program requirement or funds available for NASA program SERPL use, payment

by NASA or its contractors for SERPL use is discontinued for a period of one year, and SFA is unable after all due diligence to obtain commercially reasonable arrangements or other use acceptable to NASA to replace SFA's lost revenue. NASA shall retain discretion to approve or disapprove any proposed SERPL use in any event, financial or other SFA considerations notwithstanding.

20.8. SFA shall vacate and surrender the Designated Site, and remove the SERPL and related improvements (excluding foundations), within 60 days from the Term Expiration Date as set forth in this Agreement, or its earlier termination. SFA shall, at its own expense, remove all property not belonging to NASA or its agents or contractors from the Designated Site and restore the Designated Site to as good order and condition, reasonable wear and tear and damage beyond the control of SFA excepted, as that existing on the effective date of this Agreement. If SFA fails or neglects to remove its property, then, at the option of NASA, the property shall either become the property of the United States without compensation, or NASA may cause it to be removed and the Designated Site to be so restored at the expense of SFA, and no claim for damages against the United States or its officers, employees, or agents shall be created by or made on account of such removal and restoration work. Surrender of such property shall not be deemed to be a payment of rent in lieu of any rent due under this Agreement.

21. NASA RIGHT OF ENTRY

Representatives of NASA shall have the right at any time to enter upon the SERPL and Designated Site and any property constructed or being constructed by SFA pursuant to this Agreement, for any purpose connected with the administration of the NASA Kennedy Space Center, NASA programs, connected services, or NASA use of the property, but not so as to unreasonably interfere with SFA's use of such property.

22. EASEMENTS AND RIGHTS OF WAY

NASA reserves to itself the right to construct, use, and maintain across, over, and under the Designated Site for purposes of electric transmission, communications, water, gas, gasoline, oil and sewer lines, and other utilities, in such manner as not to create any unreasonable interference with SFA's use of the Designated Site. Subject to NASA safety and security considerations, NASA agrees to grant and does hereby grant to SFA such easements, rights of entry, corridors or other access necessary for ingress and egress of persons, vehicles, equipment, utilities and other services required for the construction, access, use, operation, maintenance and, if required, demolition of SERPL.

23. REAL PROPERTY

NASA shall retain title to all real property within the SERPL Designated Site, with the exception of buildings financed, constructed, maintained, and operated by SFA during the period of this Agreement. During the effective period of this Agreement, the SERPL will be considered real property owned by SFA.

24. ASSIGNMENTS, SUBLEASES, AND LICENSES

24.1. SFA shall neither transfer nor assign this Agreement or any interest therein or any property on the Designated Site, nor sublet the Designated Site or any part thereof or any property thereon, nor grant any interest, privilege, or license whatsoever in connection with this Agreement without the prior written consent of the Director, KSC. No transfer or assignment of any such interest, no matter how entered into, shall be effective, nor shall any assignee, transferee or user acquire any rights to or under this Agreement, unless prior consent to any such assignment, transfer or use is obtained from NASA.

24.2. A request for approval of any assignment of any interest by SFA shall be in writing delivered to the Director, KSC. Any consent by NASA to any act of assignment or sublease hereunder shall be held to apply only to the specific transaction thereby authorized, and such consent shall not be construed as a waiver of the duty of SFA to obtain such consent to any other assignment or sublease.

24.3. Any assignment or sublease granted by SFA shall be consistent with all of the terms and conditions of this Agreement and shall terminate immediately upon the Expiration Date or any earlier Termination of this Agreement, without any liability on the part of NASA to SFA or any assignee or sub-lessee. Under any assignment or sublease made, with or without consent, the assignee or sub-lessee shall be deemed to have assumed all of the obligations of SFA under this Agreement. No assignment or sublease of this Agreement shall relieve SFA of any of its obligations hereunder.

24.4. SFA shall furnish to NASA, for its prior written consent, a copy of each agreement of assignment or sublease it proposes to execute. Such consent may include the requirement to delete, add, or change provisions in the sublease instrument as NASA may deem reasonably necessary to protect its interests.

25. AMENDMENT

This Agreement may be amended at any time by mutual agreement of the Parties in writing and signed by a duly authorized representative of each of the

respective Parties hereto. Amendments to this Agreement executed on behalf of NASA shall be signed at the level of the Director, Facilities Engineering Division, NASA Headquarters.

26. LIABILITY AND RISK OF LOSS

26.1. Each party agrees to assume liability for its own risks associated with activities undertaken in this agreement.

26.2. Except as is otherwise provided for herein, neither Party shall have any liability for the acts, omissions, or negligence of the other Party, its agents, servants, or employees. In all instances applicable hereto, each Party shall be responsible for any and all injury or property damage arising on, upon, or in connection with its activities under this Agreement.

27. SOVEREIGN IMMUNITY

By the execution of this Agreement, neither Party nor any agency or subdivision of either Party waives any defense of sovereign immunity or increases the limits of its liability.

28. NOTICES

All notices given under this Agreement shall be in writing and shall be served by certified mail, return receipt requested, or by hand delivery to the last address of the party to whom notice is to be given. NASA and SFA hereby designate their addresses as follows:

NASA: John F. Kennedy Space Center, TA-F
Kennedy Space Center, FL 32899
Attn: Real Property Officer

SFA: Spaceport Florida Authority
100 Spaceport Way
Cape Canaveral, FL 32920-4003
Attn: Executive Director

29. NONDISCRIMINATION

NASA and SFA shall not discriminate against any individual because of that individual's race, color, religion, sex, national origin, age, handicap, or marital status with respect to any activity under this agreement.

30. ENTIRE UNDERSTANDING

This Agreement sets forth the entire understanding between the parties.

31. GOVERNING LAW

31.1. This Agreement shall be governed by and interpreted according to federal law for all purposes, including, but not limited to, determining the validity of the Agreement, the meaning of its provisions, and the rights, obligations and remedies of the Parties.

31.2. To the extent not inconsistent with federal law, this Agreement shall be governed by and interpreted according to the laws of the State of Florida and those requirements set forth in the Schedule attached hereto as Exhibit E. Nothing in this Agreement or Exhibit E is intended to extend the application of Chapter 119, Florida Statutes to reach any NASA or Federal agency records or information, the public disclosure of which will be governed by the Freedom of Information Act, as amended, 5 U.S.C. §552; the Privacy Act of 1974, 5 U.S.C. §552a; the Trade Secrets Act, 18 U.S.C. §1905; various procurement statutes (see generally Subpart 3.1 of the Federal Acquisition Regulation); and other Federal statutes which provide exemptions, exceptions, or prohibitions applicable to release of Federal agency records or information. Nothing in this Agreement or Exhibit E is intended to include NASA or any other Federal agency within the definition of public entity, agency, or any other unit of government as defined in Chapters 119, 287, or any other Chapter of the Florida Statutes.

32. ENFORCEABILITY

If any covenant, term, or condition of this Agreement is found to be illegal and unenforceable, the remainder of this Agreement shall remain in full force and effect and such offending covenant, term, or condition shall be deemed stricken.

33. TIME

Time is of the essence in the performance of this Agreement.

34. ANTI-DEFICIENCY ACT

All activities under or pursuant to this Agreement are subject to the availability of appropriated funds, and no provision shall be interpreted to require obligation or

provision of funds in violation of the Anti-Deficiency Act, 31 U.S.C. §1341 or Sections 287.0582 and 216.311, Florida Statutes.

IN WITNESS WHEREOF, THE PARTIES HAVE EXECUTED THIS USE PERMIT AS OF THE DATE LAST SET FORTH BELOW.

KSC APPROVAL:

/s/ Roy D. Bridges, Jr

Roy D. Bridges, Jr.
Director Kennedy Space Center
NASA
DATE: 2/8/01

SFA APPROVAL:

/s/ Edward Gormel

Ed Gormel
Acting Executive Director
Spaceport Florida Authority
DATE: 2/8/01

NASA HEADQUARTERS APPROVAL:

/s/ William W. Brubaker

W. W. Brubaker
Director Facilities Engineering
NASA
DATE: 2/6/01

EXHIBIT A

DESIGNATED SITE

(INSERT SITE DESIGNATION DRAWING HERE)

EXHIBIT B

SCHEDULE

ID	Task Name	Duration	Start	Finish
2				
3	SERPL	1415 d	Thu 12/02/99	Thu 10/16/03
4	CBD ANNOUNCEMENT	0 d	Thu 12/02/99	Thu 12/02/99
5	SELECTION OF DESIGN FIRM	34 d	Tue 02/08/00	Mon 03/13/00
12	SELECT CONSTRUCTION MANAGER	71 d	Fri 06/23/00	Fri 09/01/00
13	FACILITY DESIGN	414 d	Tue 08/29/00	Tue 10/16/01
47	SITE DESIGN	428 d	Tue 08/29/00	Tue 10/30/01
80	SITE CONSTRUCTION	154 d	Tue 04/24/01	Mon 09/24/01
81	FACILITY CONSTRUCTION	550 d	Wed 10/17/01	Sat 04/19/03
82	FACILITY ACTIVATION	180 d	Sun 04/20/03	Thu 10/16/03
83	FACILITY READINESS DATE	0 d	Thu 10/16/03	Thu 10/16/03

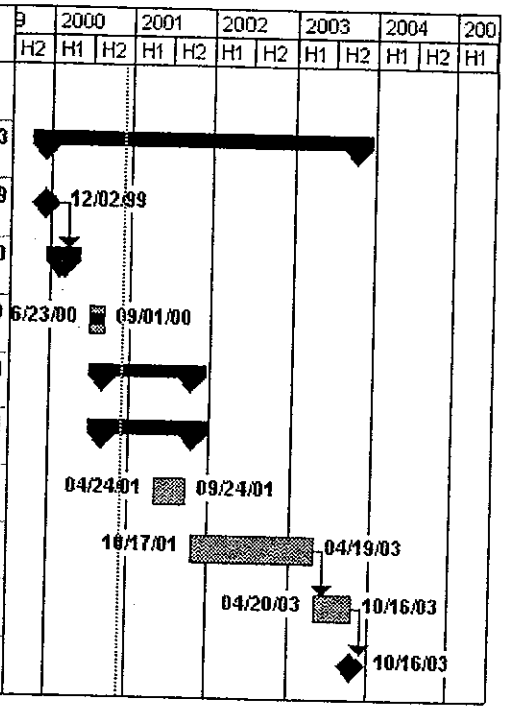

EXHIBIT C

STANDARD TERMS FOR REIMBURSEMENT FOR USE OF NASA RESOURCES

(a) In the event SFA elects to utilize, and NASA consents to provide, any NASA resources in fulfilling SFA responsibilities, NASA shall be reimbursed by SFA in connection with the use of Government property and services provided to SFA by NASA. Requests from SFA to NASA for support may be in the form of periodic support (level-of-effort, on-call or unit-priced) or individual mission or individual project-related support. NASA will provide to SFA a cost estimate for the support requested by SFA and for any other services that are deemed necessary by NASA.

(b) SFA understands that NASA's projected cost information may be only an estimate. Charges for goods and services will be billed consistent with U.S. Federal law and NASA policy. Cost estimates for the use of property and/or services and payment schedules shall be established under subagreement or subagreement annexes between SFA and NASA consistent with law and NASA policy, including the requirement for payment in advance of NASA incurrence of costs. Payment schedules for either periodic support activities or individual project or individual mission support activities shall include an initial payment of not less than 10 percent of the total estimated cost.

(c) Nothing in this Agreement waives SFA's obligation to reimburse the Government in accordance with the terms of other agreements or contracts with the Government that provide for SFA's use, or any of SFA's contractors' use, of the same Government property or services utilized by SFA or its subcontractors pursuant to this Agreement.

(d) Advance payments shall be scheduled to keep pace with the rate at which NASA anticipates incurring costs. Both the overall cost and the payment schedule shall be mutually agreed to prior to the use of Government property and services. Prompt payment is the essence of this Agreement. If SFA fails to make payment by the payment due date, NASA may terminate this Agreement for SFA's breach of this Agreement after notice to SFA of the breach and SFA's failure to cure such breach within a reasonable period of time.

(e) All payments defined in this Agreement shall be in accordance with the following:

(1) Payment shall be in U.S. dollars.

(2) Payment shall be payable to the National Aeronautics and Space Administration.

(3) Payment shall be through U.S. Treasury FEDWIRE Deposit System or other means, as required by the Center Deputy Chief Financial Officer for Finance, GG-B.

(4) Payment shall be received at NASA by the first Government working day that is also a day on which commercial banks are open for business in both New York, NY, and Washington, DC, in the month in which such payments are scheduled, unless otherwise explicitly stated herein, or directed or agreed to by NASA, in writing, as an alternative to sending payments as specified in (3) above.

(f) All payments toward and other communications regarding this Agreement shall reference the title, date, and number of this Agreement.

(g) NASA shall forward to SFA a financial status report on a periodic basis showing the status of payments received and costs incurred for services under this Agreement. If, as a result of this status report, additional payment from SFA is required, prompt payment is required and the payment schedule shall be adjusted accordingly. If an overpayment has occurred, credit will be reflected on the next status report under this Agreement.

(h) NASA shall send a final status report to SFA identifying costs for services as soon as possible after the completion of the last service provided. The final status report will address any additional payment required and will address any refund due SFA.

(i) If, as a result of the final status report, an additional payment from SFA is required, such payment shall be due 60 days after the date of the final status report. If, as a result of a final status report, a refund is due to SFA, NASA will make such refund in the amount of the overpayment within 60 days after the date of the final status report.

EXHIBIT D

PROJECT DEFINITION DOCUMENT

1. Scope and Purpose.

2. Initiating Organization and Date.

3. Description of Project:
   Engineer's White Pages of Project (2-3 Pages).
   Information for complete NASA Form 1509.

4. Internal or External to Existing Facility.

5. Effects or Changes to Utilities:

Power	___yes	___no
Communication	___yes	___no
Gas	___yes	___no
Water	___yes	___no

6. Environment.

7. Tentative Schedule.

8. Rough Order Magnitude:
   No requirement to submit to NASA if under $50,000 and does not effect external facility utilities or environment.

9. Attachments:
   Engineering sketch of project as applicable.

_____ SFA Requester/Initiator

_____ SFA Project Manager Concurrence

_____ NASA Approval Authority

[insert Form 1509 here]

EXHIBIT E

GENERAL CONDITIONS FOR FLORIDA AGREEMENTS

In accordance with Condition 31.2 and other provisions of NASA/SFA Real Property Use Permit Agreement (KCA No. 1683), NASA hereby agrees to comply with the following statutory requirements of the State of Florida. SFA shall use due diligence in efforts to secure a waiver of all included audit and other requirements which the Comptroller of the State of Florida or other State Executive authority may be authorized to waive.

1. In accordance with § 287.134(3)(a), Florida Statutes, an entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid on a contract to provide goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit a bid on leases of real property to a public entity, may not award or perform work as a contractor, supplier, subcontractor, or consultant under contract with any public entity, and may not transact business with any public entity.

2. This Agreement may be unilaterally terminated by SFA for refusal by NASA to allow public access to all documents, papers, letters, or other material subject to the provisions of Chapter 119, Florida Statutes, and made or received by the NASA in conjunction with this Agreement.

3. Section 287.133(3)(a), Florida Statutes, requires that a person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, FLORIDA STATUTES, for Category Two for a period of 36 months from the date of being placed on the convicted vendor list.

4. NASA is prohibited from expending state funds received from this Agreement for the purpose of lobbying the Florida Legislature, judicial branch, or a State of Florida agency.

[end of Exhibit E]

ATTACHMENT II

DD Form 254
CONTRACT SECURITY CLASSIFICATION SPECIFICATION

DEPARTMENT OF DEFENSE

CONTRACT SECURITY CLASSIFICATION SPECIFICATION

(The requirements of the DoD Industrial Security Manual apply to all aspects of this effort)

1. CLEARANCE AND SAFEGUARDING

a. FACILITY CLEARANCE REQUIRED: Secret

b. LEVEL OF SAFEGUARDING REQUIRED: NONE

2. THIS SPECIFICATION IS FOR: (X and complete as applicable)

- ☐ a. PRIME CONTRACT NUMBER
- ☐ b. SUBCONTRACT NUMBER
- ☒ c. SOLICITATION OR OTHER NUMBER: RFP 10-00-0051 — Due Date (YYMMDD):

3. THIS SPECIFICATION IS: (X and complete as applicable)

- ☐ a. ORIGINAL (Complete date in all cases) — Date (YYMMDD):
- ☐ b. REVISED (Supersedes all previous specs) — Revision No.: — Date (YYMMDD):
- ☐ c. FINAL (Complete item 5 in all cases) — Date (YYMMDD):

4. IS THIS A FOLLOW-ON CONTRACT? ☐ YES ☒ NO. If Yes complete the following

Classified material received or generated under _____ *(Preceding Contract Number)* is transferred to this follow-on contract

5. IS THIS A FINAL DD FORM 254? ☐ YES ☒ NO. If Yes complete the following

In response to the contractor's request dated _____, retention of the identified classified material is authorized for the period of _____.

6. CONTRACTOR *(Include Commercial and Government Entity (CAGE) Code)*

a. NAME, ADDRESS, AND ZIP CODE	b. CAGE CODE	c. COGNIZANT SECURITY OFFICE *(Name, Address, and Zip Code)*

7. SUBCONTRACTOR

a. NAME, ADDRESS, AND ZIP CODE	b. CAGE CODE	c. COGNIZANT SECURITY OFFICES *(Name, Address, and Zip Code)*

8. ACTUAL PERFORMANCE

a. LOCATION	b. CAGE CODE	c. COGNIZANT SECURITY OFFICE *(Name, Address, and Zip Code)*
Kennedy Space Center, FL and Cape Canaveral AFS, FL		

9. GENERAL IDENTIFICATION OF THIS PROCUREMENT

Effort will support life science activities at KSC.

10. THIS CONTRACT WILL REQUIRE ACCESS TO:	YES	NO	11. IN PERFORMING THIS CONTRACT, THE CONTRACTOR WILL:	YES	NO
a. COMMUNICATIONS SECURITY (COMSEC) INFORMATION	☐	☒	a. HAVE ACCESS TO CLASSIFIED INFORMATION ONLY AT ANOTHER CONTRACTOR'S FACILITY OR A GOVERNMENT ACTIVITY	☒	☐
b. RESTRICTED DATA	☐	☒	b. RECEIVE CLASSIFIED DOCUMENTS ONLY	☐	☒
c. CRITICAL NUCLEAR WEAPON DESIGN INFORMATION	☐	☒	c. RECEIVE AND GENERATE CLASSIFIED MATERIAL	☐	☒
d. FORMERLY RESTRICTED DATA	☐	☒	d. FABRICATE, MODIFY, OR STORE CLASSIFIED HARDWARE	☐	☒
e. INTELLIGENCE INFORMATION:			e. PERFORM SERVICES ONLY	☐	☒
(1) Sensitive Compartmented Information (SCI)	☐	☒	f. HAVE ACCESS TO U.S. CLASSIFIED INFORMATION OUTSIDE THE U.S., PUERTO RICO, U.S. POSSESSIONS AND TRUST TERRITORIES	☐	☒
(2) Non-SCI	☐	☒	g. BE AUTHORIZED TO USE THE SERVICES OF DEFENSE TECHNICAL INFORMATION CENTER (DTIC) OR OTHER SECONDARY DISTRIBUTION CENTER	☐	☒
f. SPECIAL ACCESS INFORMATION	☐	☒	h. REQUIRE A COMSEC ACCOUNT	☐	☒
g. NATO INFORMATION	☐	☒	i. HAVE A TEMPEST REQUIREMENT	☐	☒
h. FOREIGN GOVERNMENT INFORMATION	☐	☒	j. HAVE OPERATIONS SECURITY (OPSEC) REQUIREMENTS	☐	☒
i. LIMITED DISSEMINATION INFORMATION	☐	☒	k. BE AUTHORIZED TO USE THE DEFENSE COURIER SERVICE	☐	☒
j. FOR OFFICIAL USE ONLY INFORMATION	☐	☒	l. OTHER *(Specify)*	☐	☒
k. OTHER *(Specify)*	☐	☒			

DD Form 254, DEC 1999 *Previous editions are obsolete*

12. PUBLIC RELEASE. Any information *(classified or unclassified)* pertaining to this contract shall not be released for public dissemination except as provided by the industrial Security Manual or unless it has been approved for public release by appropriate U.S. Government authority. Proposed public release shall be submitted for approval prior to release

☐ Direct ☒ Through *(Specify):*

John F. Kennedy Space Center
Attn: XA-A
Kennedy Space Center, FL 32899

to the Directorate for Freedom of Information and Security Review, Office of the Assistant Secretary of Defense (Public Affairs)* for review.
*In the case of non-DoD User Agencies, requests for disclosure shall be submitted to that agency.

13. SECURITY GUIDANCE. The security classification guidance needed for this effort is identified below. If any difficulty is encountered in applying this guidance or if any other contributing factor indicates a need for changes in this guidance, the contractor is authorized and encouraged to provide recommended changes; to challenge the guidance or classification assigned to any information or material furnished or generated under this contract; and to submit any questions for interpretation of this guidance to the official identified below. Pending final decision, the information involved shall be handled and protected at the highest level of classification assigned or recommended. *(Fill in as appropriate for the classified effort. Attach, or forward under separate correspondence, any document/guides/extracts referenced herein. Add additional pages as needed to provide complete guidance.*

Security classification guidance will be provided under separate cover

14. ADDITIONAL SECURITY REQUIREMENTS. Requirements, in addition to ISM requirements, are established for this contract. *(If Yes, identify the pertinent contractual clauses in the contract document itself, or provide an appropriate statement which identifies the additional requirements. Provide a copy of the requirements to the cognizant security office. Use Item 13 if additional space is needed.)* ☒ Yes ☐ No

As a long term visitor to KSC the contractor will comply with all applicable KSC security issuances.

15. INSPECTIONS. Elements of this contract are outside the inspection responsibility of the cognizant security office. *(If Yes, explain and identify specific areas or elements carved out and the activity responsible for inspections. Use Item 13 if additional space is needed.* ☒ Yes ☐ No

Inspection of contractor activities are the responsibility of the NASA/KSC Protective Services Office.

16. CERTIFICATION AND SIGNATURE. Security requirements stated herein are complete and adequate for safeguarding the classified information to be released or generated under this classified effort. All questions shall be referred to the official named below.

a. TYPED NAME OF CERTIFYING OFFICIAL	b. TITLE	c. TELEPHONE *(Include Area Code)*
Jo Ann Brophy	Industrial Security Officer	(321) 867-2453

d. ADDRESS *(Include ZIP Code)*
NASA/KSC
Attn: TAE2

e. SIGNATURE

17. REQUIRED DISTRIBUTION

- ☒ a. CONTRACTOR
- ☐ b. SUBCONTRACTOR
- ☒ c. COGNIZANT SECURITY OFFICE FOR PRIME AND SUBCONTRACTOR
- ☐ d. U.S. ACTIVITY RESPONSIBLE FOR OVERSEAS SECURITY ADMINISTRATION
- ☒ e. ADMINISTRATIVE CONTRACTING OFFICER
- ☒ f. OTHERS AS NECESSARY XA-A

DD Form 254 Reverse, DEC 1999

ATTACHMENT III

DRAFT

PERFORMANCE EVALUATION AND AWARD FEE PLAN

Life Science Services Contract (NAS10-02001)

PERFORMANCE EVALUATION and AWARD FEE PLAN

1. Introduction

This plan serves as the Government's surveillance plan with processes for evaluating performance and awarding fee on this contract. This plan covers both the subjectively evaluated award fee and the objectively evaluated performance fee as described in this document. The total available fee pool is divided into an available award fee pool (75% of the total available fee pool) and a performance fee pool (25% of the total available fee pool) as shown in Contract Table B-2.A.

Prior to the beginning of each evaluation period the Government will provide the Contractor with specific areas of emphasis. The Government may unilaterally modify the areas of emphasis and the performance metrics prior to the beginning of any evaluation period. The Government will provide the Contractor with quarterly performance status and perform a final evaluation on a yearly basis (note: the first evaluation period is nine months). The yearly final performance evaluation will become the basis for which the Contractor will be awarded fee. All award fee and performance fee available for the year evaluated which is not earned by the Contractor shall be deemed to have been lost and will not be available in later evaluation periods. The Contracting Officer or the COTR (either orally or in writing) will notify the Contractor of performance levels that require immediate attention on a timely basis.

2. Performance Evaluation Process

A. Award Fee Evaluation

The COTR accumulates performance data, develops performance evaluation reports, and presents the findings to the Contract Award Fee Board and the Fee Determination Official (FDO). At the end of each quarterly review period the COTR will obtain performance information from all Mission Element Managers, the NASA SR&QA Manager, the Contracting Officer, and the Resource Specialist. The reviewer shall rate the contractor's performance and provide their input to the COTR by the requested date.

The COTR will conduct a quarterly review of the contractor's performance with input from each cognizant evaluator. The Contractor shall furnish a quarterly self-evaluation in accordance with its Internal Surveillance Plan. The COTR will consider the contractor's quarterly self-evaluation and the performance review from the Government evaluators, summarize the substance of the quarterly review in writing, and transmit a copy to the contractor and all members of the Contract Award Fee Board (CAFB). The COTR will complete the quarterly reports within 15 days following the end of each quarter. The purpose of these communications shall be to discuss any specific areas where the contractor has excelled and areas where future emphasis is necessary.

Within 30 calendar days following each performance year, the COTR will prepare a report on the evaluation of the contractor's performance. The contractor will be furnished a copy of the report without an adjective rating or numerical score assigned for the period. Within seven calendar days from receipt of the evaluation report, the contractor may, if so desired, submit in writing to the COTR additional data bearing on the performance evaluation. The contractor's comments, if any, will be included in the final report to the CAFB. The COTR will furnish a copy of the final report to all members of the CAFB for review at least seven calendar days prior to the scheduled presentation date. The contractor may also request an opportunity to give a presentation to the CAFB concerning his performance. The COTR will present the findings of the evaluation report to the CAFB. Presentations will be made not more than 45 calendar days after the end of each performance period.

The following provides methods for the quality assurance surveillance of Contractor's performance:

General Observation: Evaluation through general observation of site conditions, while performing other job functions. Obvious failure to perform work shall be recorded as discrepancies at the next practical time.

Documentation Check: Plans, reports, and schedules submitted by the Contractor will be reviewed for content to confirm that contractual requirements are planned, scheduled, and reported in a thorough, concise, and accurate manner. The Contractor is responsible for accurately reporting work that was either rescheduled or not completed. Work reported as not completed should be recorded by the evaluator.

Validated Customer Complaint: The evaluators will validate selected customer complaints as soon as practical after receipt of a complaint.

Unscheduled Inspection: Unscheduled inspections may be conducted on any location/operation, at any time, but will usually be limited to those of particular importance, such as critical areas or areas where performance problems are suspected. Unscheduled inspections will be normally conducted when performance is below satisfactory or has a trended decrease.

Planned Inspection: This involves a planned approach of inspecting for performance that may or may not be shared with the Contractor. This will normally be performed only on highly critical areas, or where performance is unacceptable. Depending upon results of evaluations, more samples may be planned and added during the evaluation period.

After collection of pertinent information, the COTR may recommend corrective action for any observed problem. Depending upon the severity and frequency of a problem, the COTR may take one or more of the following actions.

- Notify the contractor to perform re-work.
- Notify the contractor to develop and implement a corrective action plan.
- Notify the Contract Award Fee Board of the problem.
- Notify the Contracting Officer (CO) of the problem.

The FDO will determine award fee annually based upon the results of the performance evaluation and other inputs.

B. Performance Fee Metrics

The Contractor's self evaluation reports shall include data that supports its accomplishment of the performance fee element metrics as defined in Section 7 below. The NASA evaluators will provide data to the COTR and the CO regarding the Contractor's accomplishment of the performance fee elements as part of their performance evaluation input. The Contracting Officer and the Contracting Officer's Technical Representative will validate the data submitted by the Contractor and the NASA evaluators and present a report to the CAFB. The CAFB and the FDO will make the decision on which performance fee elements were accomplished during the period.

3. AWARD FEE EVALUATION CRITERIA

The evaluation of technical performance will include an assessment of risk management (including mission success, safety, health, export control, and damage to the environment, as appropriate), adherence to contract requirements, and continual improvement and initiative. The assessment will review the Contractor's adherence to schedule requirements and its actions on anticipated delays. Cost performance will evaluate the Contractor's performance against the negotiated estimated cost of the contract and accuracy of its estimating process. Contract management is evaluated as a function of both performance and cost.

An overall performance evaluation and fee determination of zero shall be made for any evaluation period when there is a major breach of safety / health or security as defined in NFS 1852.223-75, Major Breach of Safety or Security.

4. FEE DETERMINATION

A. Award Fee Determination

The Fee Determination Official (FDO) will make award fee determinations, up to the maximum potential amounts specified in the contract schedule. The report provided by the COTR as a result of the Performance Evaluation Plan process is the key element in determining the award fee amount. Other inputs include the contractor's self-evaluation and considerations such as timeliness, technical ingenuity, responsiveness, flexibility, and the ability to manage unanticipated situations / conditions with minimum adverse impact.

The CAFB will convene to review the performance evaluation report, contractor's comments, and such other information as may be appropriate. After consideration of this data, the CAFB will assist the FDO in determining an appropriate amount of award fee. The FDO will notify the Contracting Officer in writing of the amount of award fee, if any determined to have been earned during the evaluation period.

Schedule 1, Numerical Scores and Adjective Definitions, sets forth the adjective ratings, definitions, and associated numerical scoring ranges to be used to define the various levels of performance under the contract. Schedule 2, Award Fee Scale, sets forth in graphic and tabular form the award fee earned at various performance ratings.

B. Performance Fee Determination

The Contracting Officer and the Contracting Officer's Technical Representative will validate the data submitted supporting performance fee and calculate earned performance fee based on the formula herein. This information will be included in the report to the CAFB. The FDO will make the final decision on the performance fee earned. The FDO will notify the Contracting Officer in writing of the amount of performance fee, if any determined to have been earned during the evaluation period.

C. Distribution of Fee

The Contracting Officer will notify the contractor of total fee (award and performance fee) determination. Following notification of the fee determination, the Contracting Officer will issue a modification to the contract identifying the amount of award fee and performance fee earned, which also directs payment be made by the KSC accounts payable office, less any provisional payments of fee.

The Contractor may, within 30 calendar days following receipt of a fee determination, appeal such determination directly to the Center Director in writing with copies to the CTM and the FDO. The Center Director shall review the case and may request additional documentation from KSC officials and the appealing contractor. The Center Director shall prepare a unilateral determination as to the total amount of fee (award

and performance) to be awarded in connection with the appeal. This determination shall not be subject to the clause of the contract entitled "Disputes" or any other provision of the contract.

SCHEDULE 1

NUMERICAL SCORES AND ADJECTIVE DEFINITIONS

Numerical Range	Adjective Rating	Adjective Definitions
91-100	Excellent	Of exceptional merit; exemplary performance in a timely, efficient, and economical manner; very minor (if any) deficiencies with no adverse effect on overall performance.
81-90	Very Good	Very effective performance, fully responsive to contract requirements accomplished in a timely, efficient, and economical manner for the most part; only minor deficiencies.
71-80	Good	Effective performance; fully responsive to contract requirements; reportable deficiencies, but with little identifiable effect on overall performance.
61-70	Satisfactory	Meets or slightly exceeds minimum acceptable standards; adequate results; reportable deficiencies with identifiable, but not substantial, effects on overall performance.
60 and Below	Poor/Unsatisfactory	Does not meet minimum acceptable standards in one or more areas; remedial action required in one or more areas; deficiencies in one or more areas that adversely affect overall performance.

SCHEDULE 2
AWARD FEE SCALE

Adjectives	Numerical Scale	% of Available Award Fee
Excellent	100	100
	99	99
	98	98
	97	97
	96	96
	95	95
	94	94
	93	93
	92	92
	91	91
VERY GOOD	90	90
	89	89
	88	88
	87	87
	86	86
	85	85
	84	84
	83	83
	82	82
	81	81
GOOD	80	80
	79	79
	78	78
	77	77
	76	76
	75	75
	74	74
	73	73
	72	72
	71	71
SATISFACTORY	70	70
	69	69
	68	68
	67	67
	66	66
	65	65
	64	64
	63	63
	62	62
	61	61
UNSATISFACTORY	60 or Below	0

5. Actual Available Performance Fee Pool Determination

The total available fee pool is divided into an available award fee pool and an available performance fee pool as shown in Contract Table B-2.A. The actual available performance fee pool that the contractor is eligible to earn is based on its award fee score for the same period, in accordance with the following table:

Minimum Award Fee Score required to earn Performance Fee	Performance Fee Pool Percentage (PFPP) Available for Award
71 – 74	10%
75 – 80	20%
81 – 84	40%
85 – 87	70%
88 – 90	80%
91	91%
92	92%
93	93%
94	94%
95	100%

The Actual Available Performance Fee (AAPF) will be calculated after the award fee score has been issued by the Fee Determination Official as follows:

AAPF = APF * PFPP

AAPF = Actual Available Performance Fee
APF = Available Performance Fee as established in Contract Table B-2.A prior to evaluation
PFPP = Performance Fee Pool Percentage (from chart above)

6. Performance Fee Evaluation Metrics

The performance fee evaluation and fee determination are intended to be an objective evaluation based on the contractors performance against the metrics below. Each of the performance fee elements listed below are earned individually as a percentage of the Actual Available Performance Fee pool. The performance fee elements along with associated metrics and objective performance fee percentages identified are in the following table:

Performance Fee Elements	Metric	Objective Performance Fee Percentage
A. Medical planning for shuttle launch and landing activities	KSC medical packages shall be delivered in final copy accepted by the Government not-later-than (NLT) 24 hours prior to Terminal Count Down Test and landing and NLT Launch Medical Readiness Meeting for each launch during the period 100% of the time	20% of the actual available Performance Fee pool
B. Ecological program implementing KSC's regulatory responsibilities and demonstrating environmental stewardship	Submit accurate rocket effluent diffusion model prior to each shuttle launch 100% of the time during the year	15% of the actual available Performance Fee pool
C. Biological science technical insight and development skills at the launch and landing site assuring science credibility	Publish 30 peer reviewed articles in internationally recognized journals per year on topics related to KSC's life science activities	15% of the actual available Performance Fee pool
D. Facility/lab readiness and certifications	Ensure that the animal care facilities are accredited and in compliance with accreditation requirements 100% of the time	15% of the actual available Performance Fee pool
E. Health and safety initiatives protecting the workforce	Maintain a rate at or below the KSC rate for frequency of lost time due to occupational illness or injury, and Incur no loss or damage to equipment with a cumulative replacement value in excess of $10,000 during the year, and Submit reports of all "Close-calls" in a timely manner and associated mitigation action (Failure to report mishaps and close calls will result in no fee in this area), and Update the Agency Occupational Health web pages at a minimum rate of every six months.	20% of the actual available Performance Fee pool

Performance Fee Elements	Metric	Objective Performance Fee Percentage
F. Payload Development	Provide a comprehensive risk management plan for each payload developed at KSC prior to Science Readiness Review (SRR)	15% of the actual available Performance Fee pool

(All Metrics are based on yearly performance)

The performance fee elements and associated metrics and Objective Performance Fee Percentage distribution are unilaterally determined by the Government and provided to the contractor prior to the start of the mission year, with the exception of the first evaluation period as specified above. The Government reserves the right to add additional elements and/or replace elements with new elements and revise the objective performance fee percentage with no equitable adjustment to contract cost or fee.

The performance fee earned by the contractor will be determined in accordance with section 5 b. above, and distribution in accordance with 5 c. above.

ATTACHMENT IV

WAGE DETERMINATION

REGISTER OF WAGE DETERMINATIONS UNDER
THE SERVICE CONTRACT ACT
By direction of the Secretary of Labor

William W. Gross
Director

Division of
Wage Determinations

U.S. DEPARTMENT OF LABOR
EMPLOYMENT STANDARDS ADMINISTRATION
WAGE AND HOUR DIVISION
WASHINGTON, D.C. 20210

Wage Determination No.: 1994-2118
Revision No.: 16
Date of Last Revision: 05/17/2001

State: Florida

Area: Florida Counties of Brevard, Indian River

** Fringe Benefits Required Follow the Occupational Listing **

OCCUPATION TITLE	MINIMUM WAGE RATE
Administrative Support and Clerical Occupations	
Accounting Clerk I	10.19
Accounting Clerk II	11.71
Accounting Clerk III	13.83
Accounting Clerk IV	17.45
Court Reporter	12.47
Dispatcher, Motor Vehicle	11.30
Document Preparation Clerk	9.54
Duplicating Machine Operator	9.54
Film/Tape Librarian	11.91
General Clerk I	9.08
General Clerk II	10.22
General Clerk III	10.98
General Clerk IV	12.33
Housing Referral Assistant	14.77
Key Entry Operator I	9.09
Key Entry Operator II	10.76
Messenger (Courier)	8.16
Order Clerk I	9.03
Order Clerk II	12.36
Personnel Assistant (Employment) I	9.99
Personnel Assistant (Employment) II	11.24
Personnel Assistant (Employment) III	12.29
Personnel Assistant (Employment) IV	13.78
Production Control Clerk	15.83
Rental Clerk	10.99
Scheduler, Maintenance	12.43
Secretary I	12.43
Secretary II	13.67
Secretary III	14.77
Secretary IV	16.80
Secretary V	18.50
Service Order Dispatcher	10.27
Stenographer I	10.57

Stenographer II	11.33
Supply Technician	16.80
Survey Worker (Interviewer)	12.83
Switchboard Operator-Receptionist	8.23
Test Examiner	13.67
Test Proctor	13.67
Travel Clerk I	9.32
Travel Clerk II	10.09
Travel Clerk III	10.40
Word Processor I	9.69
Word Processor II	10.87
Word Processor III	12.15
Automatic Data Processing Occupations	
Computer Data Librarian	11.16
Computer Operator I	13.03
Computer Operator II	14.18
Computer Operator III	15.89
Computer Operator IV	17.45
Computer Operator V	19.46
Computer Programmer I (1)	16.15
Computer Programmer II (1)	19.35
Computer Programmer III (1)	23.39
Computer Programmer IV (1)	25.86
Computer Systems Analyst I (1)	21.79
Computer Systems Analyst II (1)	25.63
Computer Systems Analyst III (1)	27.62
Peripheral Equipment Operator	11.16
Automotive Service Occupations	
Automotive Body Repairer, Fiberglass	16.49
Automotive Glass Installer	15.00
Automotive Worker	15.00
Electrician, Automotive	15.86
Mobile Equipment Servicer	13.54
Motor Equipment Metal Mechanic	16.49
Motor Equipment Metal Worker	15.00
Motor Vehicle Mechanic	16.49
Motor Vehicle Mechanic Helper	12.74
Motor Vehicle Upholstery Worker	14.48
Motor Vehicle Wrecker	15.00
Painter, Automotive	15.76
Radiator Repair Specialist	15.00
Tire Repairer	13.08
Transmission Repair Specialist	16.49
Food Preparation and Service Occupations	
Baker	11.11
Cook I	10.11

Cook II	11.11
Dishwasher	7.82
Food Service Worker	7.82
Meat Cutter	11.11
Waiter/Waitress	8.47
Furniture Maintenance and Repair Occupations	
Electrostatic Spray Painter	15.76
Furniture Handler	12.39
Furniture Refinisher	15.76
Furniture Refinisher Helper	12.74
Furniture Repairer, Minor	14.28
Upholsterer	15.76
General Services and Support Occupations	
Cleaner, Vehicles	7.82
Elevator Operator	8.99
Gardener	10.11
House Keeping Aid I	7.82
House Keeping Aid II	9.74
Janitor	8.99
Laborer, Grounds Maintenance	8.47
Maid or Houseman	7.02
Pest Controller	12.25
Refuse Collector	8.99
Tractor Operator	9.87
Window Cleaner	9.74
Health Occupations	
Dental Assistant	10.75
Emergency Medical Technician (EMT)/Paramedic/Ambulance Driver	10.93
Licensed Practical Nurse I	9.55
Licensed Practical Nurse II	10.73
Licensed Practical Nurse III	12.01
Medical Assistant	10.73
Medical Laboratory Technician	10.73
Medical Record Clerk	12.34
Medical Record Technician	12.93
Nursing Assistant I	7.97
Nursing Assistant II	8.96
Nursing Assistant III	9.77
Nursing Assistant IV	10.98
Pharmacy Technician	11.63
Phlebotomist	10.73
Registered Nurse I	14.92
Registered Nurse II	18.25
Registered Nurse II, Specialist	18.25
Registered Nurse III	22.09
Registered Nurse III, Anesthetist	22.09

Registered Nurse IV	26.47
Information and Arts Occupations	
Audiovisual Librarian	19.30
Exhibits Specialist I	16.21
Exhibits Specialist II	19.30
Exhibits Specialist III	21.10
Illustrator I	16.22
Illustrator II	19.30
Illustrator III	21.10
Librarian	19.55
Library Technician	12.44
Photographer I	12.81
Photographer II	15.50
Photographer III	18.45
Photographer IV	20.18
Photographer V	22.30
Laundry, Dry Cleaning, Pressing and Related Occupations	
Assembler	7.18
Counter Attendant	7.18
Dry Cleaner	7.72
Finisher, Flatwork, Machine	7.18
Presser, Hand	7.18
Presser, Machine, Drycleaning	7.18
Presser, Machine, Shirts	7.18
Presser, Machine, Wearing Apparel, Laundry	7.18
Sewing Machine Operator	8.20
Tailor	8.68
Washer, Machine	6.75
Machine Tool Operation and Repair Occupations	
Machine-Tool Operator (Toolroom)	15.76
Tool and Die Maker	18.73
Material Handling and Packing Occupations	
Forklift Operator	11.20
Fuel Distribution System Operator	14.48
Material Coordinator	16.43
Material Expediter	16.43
Material Handling Laborer	6.91
Order Filler	10.61
Production Line Worker (Food Processing)	12.68
Shipping Packer	10.57
Shipping/Receiving Clerk	11.03
Stock Clerk (Shelf Stocker; Store Worker II)	12.48
Store Worker I	9.52
Tools and Parts Attendant	14.66
Warehouse Specialist	14.58

Mechanics and Maintenance and Repair Occupations

Aircraft Mechanic	16.49
Aircraft Mechanic Helper	12.74
Aircraft Quality Control Inspector	17.76
Aircraft Servicer	14.28
Aircraft Worker	15.00
Appliance Mechanic	15.76
Bicycle Repairer	13.08
Cable Splicer	16.49
Carpenter, Maintenance	15.76
Carpet Layer	15.19
Electrician, Maintenance	16.49
Electronics Technician, Maintenance I	18.04
Electronics Technician, Maintenance II	22.66
Electronics Technician, Maintenance III	25.45
Fabric Worker	14.28
Fire Alarm System Mechanic	16.49
Fire Extinguisher Repairer	13.54
Fuel Distribution System Mechanic	16.49
General Maintenance Worker	15.00
Heating, Refrigeration and Air Conditioning Mechanic	16.49
Heavy Equipment Mechanic	16.49
Heavy Equipment Operator	16.49
Instrument Mechanic	16.49
Laborer	11.04
Locksmith	15.76
Machinery Maintenance Mechanic	16.49
Machinist, Maintenance	17.68
Maintenance Trades Helper	12.74
Millwright	16.49
Office Appliance Repairer	15.76
Painter, Aircraft	15.97
Painter, Maintenance	15.76
Pipefitter, Maintenance	16.49
Plumber, Maintenance	15.76
Pneudraulic Systems Mechanic	16.49
Rigger	16.49
Scale Mechanic	15.00
Sheet-Metal Worker, Maintenance	16.49
Small Engine Mechanic	15.00
Telecommunication Mechanic I	16.49
Telecommunication Mechanic II	17.24
Telephone Lineman	16.49
Welder, Combination, Maintenance	16.49
Well Driller	16.49
Woodcraft Worker	16.49
Woodworker	13.54

Miscellaneous Occupations	
Animal Caretaker	9.00
Carnival Equipment Operator	11.35
Carnival Equipment Repairer	11.62
Carnival Worker	7.82
Cashier	6.93
Desk Clerk	7.52
Embalmer	16.57
Lifeguard	8.61
Mortician	18.67
Park Attendant (Aide)	10.83
Photofinishing Worker (Photo Lab Tech., Darkroom Tech)	8.68
Recreation Specialist	14.12
Recycling Worker	10.94
Sales Clerk	8.33
School Crossing Guard (Crosswalk Attendant)	8.46
Sport Official	7.49
Survey Party Chief (Chief of Party)	11.91
Surveying Aide	7.89
Surveying Technician (Instr. Person/Surveyor Asst./Instr.)	10.83
Swimming Pool Operator	11.11
Vending Machine Attendant	10.94
Vending Machine Repairer	12.77
Vending Machine Repairer Helper	10.94
Personal Needs Occupations	
Child Care Attendant	7.32
Child Care Center Clerk	10.48
Chore Aid	7.91
Homemaker	11.66
Plant and System Operation Occupations	
Boiler Tender	16.49
Sewage Plant Operator	15.76
Stationary Engineer	16.49
Ventilation Equipment Tender	12.74
Water Treatment Plant Operator	15.76
Protective Service Occupations	
Alarm Monitor	12.20
Corrections Officer	12.20
Court Security Officer	12.33
Detention Officer	12.20
Firefighter	13.83
Guard I	7.01
Guard II	12.38
Police Officer	14.99

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Stevedoring/Longshoremen Occupations	
Blocker and Bracer	16.68
Hatch Tender	14.97
Line Handler	14.97
Stevedore I	16.17
Stevedore II	17.91
Technical Occupations	
Air Traffic Control Specialist, Center (2)	26.07
Air Traffic Control Specialist, Station (2)	17.98
Air Traffic Control Specialist, Terminal (2)	19.79
Archeological Technician I	12.68
Archeological Technician II	14.26
Archeological Technician III	17.61
Cartographic Technician	17.61
Civil Engineering Technician	15.58
Computer Based Training (CBT) Specialist/ Instructor	21.33
Drafter I	9.26
Drafter II	11.91
Drafter III	14.41
Drafter IV	17.15
Engineering Technician I	9.30
Engineering Technician II	11.96
Engineering Technician III	14.47
Engineering Technician IV	17.22
Engineering Technician V	18.84
Engineering Technician VI	20.82
Environmental Technician	17.45
Flight Simulator/Instructor (Pilot)	25.09
Graphic Artist	20.23
Instructor	21.12
Laboratory Technician	15.89
Mathematical Technician	15.31
Paralegal/Legal Assistant I	11.16
Paralegal/Legal Assistant II	15.10
Paralegal/Legal Assistant III	18.46
Paralegal/Legal Assistant IV	22.35
Photooptics Technician	15.31
Technical Writer	19.62
Unexploded (UXO) Safety Escort	16.57
Unexploded (UXO) Sweep Personnel	16.57
Unexploded Ordnance (UXO) Technician I	20.05
Unexploded Ordnance (UXO) Technician II	24.02
Unexploded Ordnance (UXO) Technician III	16.45
Weather Observer, Combined Upper Air and Surface Programs (3)	18.27
Weather Observer, Senior (3)	16.45
Weather Observer, Upper Air (3)	

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Transportation/ Mobile Equipment Operation Occupations

Bus Driver	14.16
Parking and Lot Attendant	9.94
Shuttle Bus Driver	13.42
Taxi Driver	10.94
Truckdriver, Heavy Truck	14.89
Truckdriver, Light Truck	13.42
Truckdriver, Medium Truck	14.16
Truckdriver, Tractor-Trailer	14.89

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH & WELFARE: Life, accident, and health insurance plans, sick leave, pension plans, civic and personal leave, severance pay, and savings and thrift plans. Minimum employer contributions costing an average of $2.56 per hour computed on the basis of all hours worked by service employees employed on the contract.

VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; 3 weeks after 5 years, 4 weeks after 15 years, and 5 weeks after 20 years. Length of service includes the whole span of continuous service with the present contractor or successor, wherever employed, and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A minimum of ten paid holidays per year: New Year's Day, Martin Luther King Jr.'s Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day, and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.) (See 29 CFR 4.174)

THE OCCUPATIONS WHICH HAVE PARENTHESES AFTER THEM RECEIVE THE FOLLOWING BENEFITS (as numbered):

1) Does not apply to employees employed in a bona fide executive, administrative, or professional capacity as defined and delineated in 29 CFR 541. (See CFR 4.156)

2) APPLICABLE TO AIR TRAFFIC CONTROLLERS ONLY - NIGHT DIFFERENTIAL: An employee is entitled to pay for all work performed between the hours of 6:00 P.M. and 6:00 A.M. at the rate of basic pay plus a night pay differential amounting to 10 percent of the rate of basic pay.

3) WEATHER OBSERVERS - NIGHT PAY & SUNDAY PAY: If you work at night as part of a regular tour of duty, you will earn a night differential and receive an additional 10% of basic pay for any hours worked between 6pm and 6am. If you are a full-time employed (40 hours a week) and Sunday is part of your regularly scheduled workweek, you are paid at your rate of basic pay plus a Sunday premium of 25% of your basic rate for each hour of Sunday work which is not overtime (i.e. occasional work on Sunday outside the normal tour of duty is considered overtime work).

HAZARDOUS PAY DIFFERENTIAL: An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordinance, explosives, and incendiary materials. This includes work such as screening, blending, dying, mixing, and pressing of sensitive ordance, explosives, and pyrotechnic compositions such as lead azide, black powder and photoflash powder. All dry-house activities involving propellants or explosives. Demilitarization, modification, renovation, demolition, and maintenance operations on sensitive ordnance, explosives and incendiary materials. All operations involving regrading and cleaning of artillery ranges.

A 4 percent differential is applicable to employees employed in a position that represents a low degree of hazard when working with, or in close proximity to ordance, (or employees possibly adjacent to) explosives and incendiary materials which involves potential injury such as laceration of hands, face, or arms of the employee engaged in the operation, irritation of the skin, minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used. All operations involving, unloading, storage, and

hauling of ordance, explosive, and incendiary ordnance material other than small arms ammunition. These differentials are only applicable to work that has been specifically designated by the agency for ordance, explosives, and incendiary material differential pay.

** UNIFORM ALLOWANCE **

If employees are required to wear uniforms in the performance of this contract (either by the terms of the Government contract, by the employer, by the state or local law, etc.), the cost of furnishing such uniforms and maintaining (by laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where such cost reduces the hourly rate below that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition, where uniform cleaning and maintenance is made the responsibility of the employee, all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount, or the furnishing of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a rate of $3.35 per week (or $.67 cents per day). However, in those instances where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

** NOTES APPLYING TO THIS WAGE DETERMINATION **

Source of Occupational Title and Descriptions:

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations," Fourth Edition, January 1993, as amended by the Third Supplement, dated March 1997, unless otherwise indicated. This publication may be obtained from the Superintendent of Documents, at 202-783-3238, or by writing to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Copies of specific job descriptions may also be obtained from the appropriate contracting officer.

REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND WAGE RATE {Standard Form 1444 (SF 1444)}

Conformance Process:

The contracting officer shall require that any class of service employee which is not listed herein and which is to be employed under the contract (i.e., the work to be performed is not performed by any classification listed in the wage determination), be classified by the contractor so as to provide a reasonable relationship (i.e., appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination. Such conformed classes of employees shall be paid the monetary wages and furnished the fringe benefits as are determined. Such conforming process shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees. The conformed classification, wage rate, and/or fringe benefits shall be retroactive to the commencement date of the contract. {See Section 4.6 (C)(vi)} When multiple wage determinations are included in a contract, a separate SF 1444 should be prepared for each wage determination to which a class(es) is to be conformed.

The process for preparing a conformance request is as follows:

1) When preparing the bid, the contractor identifies the need for a conformed occupation(s) and computes a proposed rate(s).

2) After contract award, the contractor prepares a written report listing in order proposed classification title(s), a Federal grade equivalency (FGE) for each proposed classification(s), job description(s), and rationale for proposed wage rate(s), including information regarding the agreement or disagreement of the authorized representative of the employees involved, or where there is no authorized representative, the employees themselves. This report should be submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work.

3) The contracting officer reviews the proposed action and promptly submits a report of the action, together with the agency's recommendations and pertinent information including the position of the contractor and the employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of

Labor, for review. (See section 4.6(b)(2) of Regulations 29 CFR Part 4).

4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disapproves the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time will be required to process the request.

5) The contracting officer transmits the Wage and Hour decision to the contractor.

6) The contractor informs the affected employees.

Information required by the Regulations must be submitted on SF 1444 or bond paper.

When preparing a conformance request, the "Service Contract Act Directory of Occupations" (the Directory) should be used to compare job definitions to insure that duties requested are not performed by a classification already listed in the wage determination. Remember, it is not the job title, but the required tasks that determine whether a class is included in an established wage determination. Conformances may not be used to artificially split, combine, or subdivide classifications listed in the wage determination.

ATTACHMENT V

SAFETY AND HEALTH PLAN